MONETARY POLICY AND THE STATE OF THE ECONOMY

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MONETARY POLICY AND THE STATE OF THE ECONOMY

Wednesday, July 18, 2018

U.S. HOUSE OF REPRESENTATIVES,
COMMITTEE ON FINANCIAL SERVICES,
Washington, D.C.

The committee met, pursuant to notice, at 10:01 a.m., in room 2128, Rayburn House Office Building, Hon. Jeb Hensarling [chairman of the committee] presiding.

Present: Representatives Hensarling, McHenry, Royce, Lucas, Pearce, Posey, Luetkemeyer, Huizenga, Duffy, Stivers, Hultgren, Ross, Pittenger, Wagner, Barr, Rothfus, Tipton, Williams, Poliquin, Love, Hill, Emmer, Zeldin, Trott, Loudermilk, Mooney, MacArthur, Davidson, Budd, Kustoff, Tenney, Hollingsworth, Waters, Maloney, Sherman, Clay, Scott, Green, Cleaver, Moore, Ellison, Perlmutter, Himes, Foster, Kildee, Delaney, Sinema, Beatty, Heck, Vargas, Gottheimer, and Crist.

Chairman HENSARLING. The committee will come to order. Without objection, the Chair is authorized to declare a recess of the committee at any time. And all members will have 5 legislative days within which to submit extraneous materials to the Chair for inclusion in the record.

This hearing is for the purpose of receiving the semiannual testimony of the Chair of the Board of Governors of the Federal Reserve System on monetary policy and the state of the economy.

I now recognize myself for 3–1/2 minutes to give an opening statement.

As we meet today, thanks to the fiscal policies of the Trump Administration and this Congress, many Americans are seeing the strongest economy of their lifetime. Most importantly, 3 percent average economic growth is back, 90 percent of Americans are seeing bigger paychecks, and in the last quarter real disposable income increased a very strong 3.4 percent, and unemployment remains near a 50-year low.

But the economy may be challenged in significant ways if either we find ourselves in a protracted global trade war or the unconventional monetary policy tools of the Fed are not carefully and skillfully wound down in transition to normalcy.

In February, during or last Humphrey-Hawkins hearing, I questioned whether the Fed would ever return to a monetary policy balance sheet after a decade of accumulating and maintaining, in contrast, a macroprudential balance sheet. And my concern remains, because less than a year into the Fed's balance sheet wind-down some FOMC (Federal Open Market Committee) members are already calling to slow down or end the process.

We were told by the Fed that letting the roll-off schedule run for 3 or 4 years would be less exciting than watching paint dry. But as we meet today, we face the prospect that maybe the paint stays wet.

In other words, we seem to be faced with an increasing prospect of a balance sheet that may never return to a more conventional size or composition.

I believe this is problematic. An unconventional balance sheet may well threaten ultimately the integrity and independence of the Feds's conduct of monetary policy by enabling competing activities that lie outside its mandate for stable prices and full employment. This matter must be reviewed carefully.

Additionally, I have governance concerns. I would note today that only three individuals, as a practical matter, are actually empowered to set U.S. monetary policy.

This is a matter of concern. We know that interest rates on reserve deposits have now supplanted open market operations of the FOMC in playing the lead role in conducting monetary policy, given that the Board of Governors can administer interest rates on reserve deposits without any input from the FOMC or any district bank president. This means three individuals—or, to be more precise, two, given a majority vote—set monetary policy in the U.S.

I certainly don't believe this is currently being abused, but I do believe, as a matter of public policy, the full FOMC should vote on where to set interest rates on reserve deposits. And furthermore, I would call upon the Senate to expeditiously confirm the Federal Reserve Board Governors that the President has long since nominated.

Finally, many members, including myself, share a concern about the apparent inconsistency of a 2 percent inflation target with the goal of price stability. A 2 percent inflation target means that every dollar a couple sets aside at a child's birth for her college education will have lost approximately 30 percent of its purchasing power by the time the first tuition bill arrives.

I understand that other central banks do this. I understand this may be good policy. But if so, Congress should decide this, because Section 2A of the Federal Reserve Act mandates, quote, "stable prices." And last I looked up the word "stable" in the dictionary it means quote, unquote, "fixed," quote, unquote, "not changing," or, quote, unquote "permanent." And yet we see even some advocating a policy rate target that allows for even greater swings than the current 2 percent inflation target.

Chairman Powell, we welcome you and we look forward to hearing more about these issues, and we look forward to a prudent path to normalization where interest rates are once again market based and credit is allocated to its most efficient use.

I now recognize the Ranking Member of the committee, the gentlelady from California, for 3 minutes for an opening statement.

Ms. WATERS. Thank you, Mr. Chairman.

And welcome, Chairman Powell.

Mr. Chairman, I am very concerned about the impact of the reckless economic policies of Donald Trump on hardworking Americans, vulnerable families, and our Nation's economy. This President has started a trade war that is already harming American consumers and companies.

For example, Whirlpool, based in Michigan has seen its share price drop over 15 percent as a result of Trump's tariffs on steel and aluminum. Washing machines and dryer prices have increased 20 percent. According to The Wall Street Journal, the mayor of Clyde, Ohio, where Whirlpool has a plant, commented on the tariffs saying, I quote, "People's anxiety level is higher because nobody knows what is going on," quote, unquote.

The tax scam that the Congressional Republicans and President Trump pushed through, explodes the deficit and raises taxes on 86 million American families to help out big corporations and very wealthy individuals. But most of these corporations are not using the windfall to pay better wages to their employees. Instead, they are buying back their own stock to boost share prices and enrich their CEOs. And in the end, this massive misguided giveaway will be paid for by future generations of taxpayers.

In addition, the Trump Administration's latest budget proposal makes deep cuts to important healthcare, nutritional assistance, housing and community development programs, and would be detrimental to families, veterans, seniors, and persons with disabilities.

In all, the Trump Administration's policies are deeply harmful and threaten the hard-earned economic gains put in motion during the Obama Administration. As a result of Democratic policies and the policies of the Federal Reserve, we are now experiencing the longest stretch of private sector job growth on record, but with these harmful economic policies Trump is putting all of that progress at risk.

So I am interested in Chairman Powell's views on these matters, especially the long-term effect of Trump's damaging economic policies and what tools, if any, the Federal Reserve has to prevent a possible recession that could be triggered by the policies of this Administration.

With that, I yield back the balance of my time.

Chairman HENSARLING. The gentlelady yields back.

The Chair now recognizes the gentleman from Kentucky, Mr. Barr, the Chairman of the Monetary Policy and Trade Subcommittee, for 1–1/2 minutes.

Mr. BARR. Thank you, Mr. Chairman.

Chairman Powell, thank you for testifying today.

As Chairman Hensarling has already stated, the economy is strong and the data supports this statement. Americans have more money in their paychecks thanks to tax reform, job creation is strong, unemployment is near a 50-year low, and many Americans who left the workforce during the financial crisis are reentering it.

While overall the economic outlook of America is bright, there are a few items that we need to carefully watch. One is uncertainty surrounding U.S. trade policy which impacts key Kentucky industry such as bourbon, agriculture, and auto manufacturing. Another is the legacy of the Fed's unconventional monetary policies and bloated asset sheet that continues to distort credit allocation. A third is a flattening yield curve that some economists warn could signal a downturn. And a final risk is out-of-date regulation, such as the G–SIB surcharge calculation that puts American banks at a disadvantage relative to their international competitors.

Chairman Powell, thank you for your service at the Federal Reserve, and I look forward to hearing from you today about these and other important topics.

I yield back.

Chairman HENSARLING. The gentleman yields back.

The Chair now recognizes the gentlelady from Wisconsin, Ms. Moore, the Ranking Member of the Monetary Policy and Trade Subcommittee, for 1 minute.

Ms. MOORE. Thank you so much, Mr. Chairman.

Mr. Chairman, it is lovely to see you again.

I am going to paraphrase and channel Ben Franklin here: Dodd-Frank gave America a stable economic system if we can keep it.

I fear your greatest challenges in the future will be directly related to the actions of Republican policymakers and our President. Ruinous trickle-down tax cuts, adopting their policies that drive debt and income inequality, and of course the Wells Fargo model, will saddle regular Americans with fourth-place payday loans to pay it all back.

Destabilizing financial deregulation and unqualified nominees like Kathy Kraninger to head the Consumer Financial Protection Bureau, capricious trade wars, Harley in my district, farmers in my State bracing for ruin, fiscal mismanagement, low grade scams, and incompetence all seem to be hallmarks of Mr. Trump.

But, as we discuss Esther 4:14, you have been called for such a time as this. God bless you.

Chairman HENSARLING. The gentlelady yields back.

The Chair now recognizes the gentleman form Michigan, Mr. Kildee, the vice Ranking Member, for 1 minute.

Mr. KILDEE. Thank you, Mr. Chairman, for yielding.

Chairman Powell, thank you for being here.

I lead an initiative in Congress entitled The Future of America's Cities and Towns. Its purpose is to fuel a national conversation around the economic health of our country's older industrial cities and towns, places like my hometown of Flint, that have not fully recovered from the Great Recession.

Even with the job growth and economic recovery we have seen, it is uneven. In economic terms there is no average American anymore. A whole cohort of communities across the country continue to experience the kind of stress that threatens their sustainability as communities and the fiscal solvency of their municipalities.

I believe we have to have a much more serious and thoughtful conversation about how we support these places and the millions of people who live there. Many of the regional banks, such as the Boston, Cleveland, and Chicago banks, have taken an interest in working to improve the fiscal health of these places within their jurisdiction. And so I would be interested in hearing your thoughts on how the Fed can help these places.

Monetary policy is by nature a broad tool for economic growth. We must have a particular focus on creating more economic opportunity for those families and those communities that continue to struggle.

Thank you, Mr. Chairman, for your indulgence.

Chairman HENSARLING. Today we welcome back to the committee for his second appearance Governor Powell, Chairman of the Board of Governors of the Federal Reserve System. Governor Powell has previously testified for this committee, so I believe he needs no further introduction.

Without objection, the witness' written statement will be made part of the record.

Chairman Powell, you are now recognized for your testimony. Welcome.

STATEMENT OF THE HON. JEROME H. POWELL

Mr. POWELL. Thank you very much, and good morning, Chairman Hensarling, Ranking Member Waters, and other members of the committee here today. I am happy to present the Federal Reserve's semiannual Monetary Policy Report to Congress.

Let me start by saying that my colleagues and I strongly support the goals that Congress has set for us for monetary policy: Maximum employment and price stability.

We also support clear and open communication about the policies we undertake to achieve these goals. We owe you and the general public clear explanations of what we are doing and why we are doing it. Monetary policy affects everyone and should be a mystery to no one.

For the past 3 years we have been gradually returning interest rates and the Fed's securities holdings to more normal levels as the economy strengthens. And we believe this is the best way we can help set conditions in which Americans who want a job can find one and in which inflation remains low and stable.

I will review the current economic situation and outlook and then turn to monetary policy.

Since I last testified here in February, the job market has continued to strengthen and inflation has moved up. In the most recent data, inflation was a little above 2 percent, the level that the Federal Open Market Committee thinks will best achieve our price stability and employment objectives over the longer run. The latest figure was boosted by a significant increase in gasoline and other energy prices.

An average of 215,000 net new jobs were created each month this year in the first half of the year. That number is somewhat higher than the monthly average for 2017. It is also a good deal higher than the average number of people who enter the workforce each month on net.

The unemployment rate edged down one-tenth of a percent over the first half of the year to 4.0 percent in June, which is near the lowest level of the past two decades.

In addition, the share of the population that either has a job or has looked for one in the past month, what we call the labor force participation rate, has not changed much since late 2013, and this development is another sign of labor market strength.

Part of what has kept that participation rate stable is that more working-age people have started looking for a job, which has helped make up for the large number of baby boomers who are retiring and leaving the workforce.

Another piece of good news is that the robust conditions in the labor market are being felt by many different groups. For example, the unemployment rates for African Americans and Hispanics have fallen sharply over the past few years and are now near their lowest levels since the Bureau of Labor Statistics began reporting data for these groups in 1972.

Groups with higher unemployment rates have tended to benefit the most as the job market has strengthened. But jobless rates for these groups are still higher than those for Whites. And while three-quarters of Whites responded in a recent Federal Reserve survey that they were doing at least OK financially in 2017, only two-thirds of African Americans and Hispanics responded that way.

Incoming data show that alongside the strong job market, the U.S. economy has grown at a solid pace so far this year. The value of goods and services produced in the economy, or GDP, rose at a modest annual rate of 2 percent in the first quarter after adjusting for inflation. However, the latest data suggested that economic growth in second quarter was considerably stronger than in the first.

And this solid pace of growth so far this year is based on several factors. Robust job gains, rising after-tax incomes, and optimism among households have lifted consumer spending in recent months. Investment by businesses has continued to grow at a healthy rate. Good economic performance in other countries has supported U.S. exports and manufacturing. And while housing construction has not increased this year, it is up noticeably from where it stood a few years ago.

I will turn now to inflation. After several years in which inflation ran below our 2 percent objective, the recent data are encouraging. The price index for personal consumption expenditures, or PCE inflation, as we call it, which is an overall measure of prices paid by consumers, increased 2.3 percent over the 12 months ending in May, and that number is up from 1.5 percent a year ago.

Overall inflation increased partly because of higher oil prices, which caused a sharp rise in gasoline and other energy prices paid by consumers.

Because energy prices move up and down a great deal, we also look at core inflation. Core inflation excludes energy and food prices and is generally a better indicator of future overall inflation.

Core inflation was 2.0 percent for the 12 months ending in May, compared with 1.5 percent a year ago. We will continue to keep a close eye on inflation with a goal of keeping it near 2 percent.

Looking ahead, my colleagues on the FOMC and I expect that with appropriate monetary policy the job market will remain strong and inflation will stay near 2 percent over the next several years.

This judgment reflects several factors. First, interest rates and financial conditions more broadly remain favorable to growth. Second, our financial system is much stronger than before the crisis and is in a good position to meet the credit needs of households and businesses. Third, Federal tax and spending policies will likely continue to support the expansion. And fourth, the outlook for economic growth abroad remains solid, despite greater uncertainties in several parts of the world.

Now, what I have just described is what we see as the most likely path for the economy. Of course, economic outcomes that we actually experience often turn out to be a good deal stronger or weaker than those in our best forecast. For example, it is difficult to predict the ultimate outcome of current discussions over trade policy, as well as the size and timing of economic effects of the recent changes in fiscal policy.

Overall, we see the risk of the economy unexpectedly weakening as roughly balanced with the possibility of the economy growing faster than we currently anticipate.

Over the first half of 2018 the FOMC has continued to gradually reduce monetary policy accommodation. In other words, we have continued to dial back the extra boost that was needed to help the economy recover from the financial crisis and the recession.

Specifically, we raised the target range for the Federal funds rate by 1/4 percentage point at both our March and June meetings, bringing the target today to its current range of 1–3/4 percent to 2 percent.

In addition, last October we started gradually reducing our holdings of Treasury and mortgage-backed securities, and that process has been running quite smoothly. Our policies reflect the strong performance of the economy and are intended to help make sure that continues.

The payment of interest on balances held by banks in their accounts at the Federal Reserve has played a key role in carrying out these policies, as the current Monetary Policy Report explains in some detail. Payment of interest on these balances is our principal tool for keeping the Federal funds rate in the FOMC's target range. This tool has made it possible for us to gradually return interest rates to a more normal level without disrupting financial markets and the economy.

As I mentioned, after many years of running below target, our longer-run objective of 2 percent inflation has recently moved close to that level, and our challenge will be to keep it there. Many factors affect inflation. Some of them are temporary and others longer lasting. Inflation will at times be above 2 percent and at other times below. And we say that the 2 percent objective is symmetric because the FOMC would be concerned if inflation were running persistently above or below that 2 percent objective.

The unemployment rate is low and expected to fall further. Americans who want jobs have a good chance of finding them. Moreover, wages are growing a little faster than they did a few years ago.

That said, they are still not rising as fast as in the years before the crisis. One explanation could be that productivity growth has been low in recent years. On a brighter note, though, moderate wage growth also tells us that the job market is not causing high inflation.

With a strong job market, inflation close to our objective, and the risks to the outlook roughly balanced, the FOMC believes that for now the best way forward is to keep gradually raising the Federal funds rate. We are aware that on the one hand raising interest rates too slowly may lead to high inflation or financial market excesses. On the other hand, if we raise rates too rapidly the economy could weaken and inflation could persistently run below our objective.

The committee will continue to weigh a wide range of relevant information when deciding what monetary policy will be appropriate. As always, our actions will depend on the economic outlook, which may change as we receive new data.

For guideposts on appropriate policy, the FOMC routinely looks at monetary policy rules that recommend a level for the Federal funds rate based on the current rates of inflation and unemployment. The July Monetary Policy Report gives an update on monetary policy rules and their role in our policy discussions. I continue to find these rules helpful, although using them requires careful judgment.

Thank you very much, and I will look forward to our conversation.

[The prepared statement of Mr. Powell can be found on page 64 of the appendix.]

Chairman HENSARLING. Thank you, Chairman Powell.

The Chair now yields to himself 5 minutes for questions.

I don't believe, Chairman Powell, there was a discussion about this on the Senate side yesterday. I didn't hear much about it in your testimony. But I still seek greater specificity on the current goals for the wind-down of the balance sheet.

It is my current understanding that it is the goal, with respect to the pace, that this wind-down will take about 3 to 4 years, that ultimately the size of the balance sheet, as of today, the target is 2 to 2.5 trillion. And with respect to composition, primarily Treasury's, but some MBS (mortgage-backed security).

Is my understanding correct? Is that the current goal of the Fed?

Mr. POWELL. So the plan is to return the balance sheet over time to a mainly Treasury balance sheet. I have provided estimates, others have provided estimates, of how long that with take. They are fairly uncertain. But my estimate has been 3 or 4 years.

What will guide the time at which we will ultimately stop shrinking the balance sheet will really be a function—and the ultimate size of the balance sheet—will really be a function of the public's demand for our liabilities.

During quantitative easing that was really about assets. In the long run what matters is the public's demand for currency, which has grown very strongly for the last few years, and also the public's demand for reserves. And in an era where we require the banks to have lots of high quality liquid assets, reserves are the ultimate high quality liquidity asset.

So I think we are going to be finding out how big that demand is for those two liabilities, and also some others. I think there are estimates. We don't have a target range, for example.

Chairman HENSARLING. OK. So you really don't know.

Mr. POWELL. That is right.

Chairman HENSARLING. Obviously, we all acknowledge there will be a greater demand for reserves, but I still would anticipate that in the 2 to 2.5 trillion that might actually exceed demand.

So I guess, Chairman Powell, my next question is, is it a goal of the Fed—so I understand you want to keep IOER (interest rate on excess reserves), that particularly today this is how monetary policy is determined. But do you see a day, is it the goal of the Federal Reserve to again have open market operations, the FOMC, primarily drive monetary policy?

So I guess this is really the debate between the floor and the corridor. Currently we are using the floor. But is that the ultimate goal? Is this a permanent tool? Or will we see a future where IOER sets the floor, the FOMC sets the higher end, and let the market determine the interest rate in between that floor and ceiling? What is the goal of the Fed?

Mr. POWELL. The committee has not made a decision on whether in the longer run will it go back to a corridor system or stay in what we have now, which is a floor system.

Chairman HENSARLING. When might the Fed contemplate this?

Mr. POWELL. We will be returning to that question, I would say fairly soon. It is something we have talked about periodically at various FOMC meetings. And my thinking is that we will return to that discussion in a serious way in the relatively near future.

Chairman HENSARLING. Well, one thing I would have you consider, Chairman Powell, as the Board of Governors takes a look at this, is ultimately the potential risk to the Fed's independence of having such an unconventional-size balance sheet.

I would say regrettably, Congress raided a relatively small fund of the Federal Reserve to fund a transportation bill. I tried to fight that. I wasn't successful. It has been raided twice. So I have joined in with my colleagues.

We also know now that the Fed funds the Bureau of Consumer Financial Protection. Both of these have nothing to do with monetary policy. I could foresee a day with a large, large balance sheet out there, and with the potential of either municipalities of States on the brink of insolvency, having Congress decide the Fed needs to buy their bonds and prop them up.

I can also see one day, an infrastructure bill coming down the pike, with no good way to pay for it, and there is a big pot of money that the Fed has, maybe the Fed should be directed to buy these bonds. And I think we are seeing some of this, frankly, across the pond when I look at the Swiss central bank or the ECB.

So I am just curious, as you think about the size of your balance sheet, do you ever consider its impact on your independence?

Mr. POWELL. We do think about those things. And we have said that the balance sheet will return to a size that is no larger than it needs to be for us to effect monetary policy in our chosen framework.

Chairman HENSARLING. Well, I just assure you, Mr. Chairman, if there is a big pot of money out there, this Congress might find a way to get its hands on it. So you might consider that as you consider the size of your balance sheet.

The time of the Chair has long since expired. The Chair now recognizes the Ranking Member.

Ms. WATERS. Thank you, Mr. Chairman.

Chair Powell, while I have heard you state repeatedly that it is too soon to tell whether the economic efforts of the recent implementation of tariffs will be either positive or negative, there are already serious indications that we are headed for trouble.

In the most recent June FOMC meeting minutes, several participants noted that their district business contacts had expressed concern about the adverse effects of tariffs and other proposed trade restrictions on future investment activity and that they were not planning any new investments to increase capacity.

Mid Continent Nail, America's largest nail manufacturer, based in Missouri, has already laid off 60 workers and expects to go out of business by Labor Day. Harley-Davidson, based in Wisconsin, is moving jobs overseas to Europe to avoid tariffs on its exports.

Whirlpool, based in Michigan, has seen its share price drop over 15 percent as a result of Trump's tariffs on steel and aluminum. Washing machine and dryer prices have increased 20 percent in the past 3 months as a result, the steepest rise in the past 12 years, according to the Department of Labor.

These tariffs are affecting the price of everything from bicycles to washers to automobiles. In addition to these immediate effects, to your point, there may be delayed negative effect on the economy as well. While the U.S. is taking a protectionist stance toward trade policy, the rest of the world is moving forward on trade without us.

What long-term economic effects can we expect to see if these tariffs continue to escalate to the point of a trade war? Do you expect the economic effects of a trade war to be felt more acutely in certain regions of the U.S.? And furthermore, is the Fed well suited to respond to a recession caused by a trade war? If not, what can be done?

Mr. POWELL. I should start by quickly reminding all of us, including me, that we stay in our lane at the Fed, and when we talk about things like fiscal policy and trade policy that are not assigned to us, we try to stay at a high level, a principle level.

But answering your question, if this process leads to a world of higher tariffs on a wide range of goods and services that are traded and those are sustained for a longer period of time—in other words, if it results in a more protectionist world, that will be bad for our economy. And it will be bad for other economies, too. It will be bad for the world economy.

That is not what the Administration says they are trying to achieve. It isn't up to us to criticize their policies in this activity.

But the evidence is clear that countries that remain open to trade have higher productivity, they have higher incomes. Not every group is affected positively by trade. There are groups that are hurt by trade. And I think all countries have learned that they need to do a better job of addressing the needs of those populations, but not through trade barriers and tariffs of that kind.

Ms. WATERS. While certainly the Fed does not have direct responsibility for trade and for tariffs, were you consulted at all when the tariff decisions were made?

Mr. POWELL. No, we play no role in the Administration's discussions on these. Like I imagine just about everyone here, we hear from our extensive network of business contacts a rising chorus of concern.

As you pointed out, lots and lots of individual companies have been harmed by this. We don't see it in the aggregate numbers yet because it is a $20 trillion economy and these things take time to show up. But we hear many, many stories of companies that are concerned and are now beginning to make investment decisions—or not make them—because of this.

Ms. WATERS. Have you had any action at all in relationship to the Chamber of Commerce? Have they talked with you? Have they sought your opinion? Have you talked with them? What do you know about the Chamber of Commerce position on tariffs?

Mr. POWELL. Well, I saw that they took a very strong public position against tariffs. We try to have good relations and strong relations with the Chamber. I haven't personally discussed their position on trade, but I know what it is.

Ms. WATERS. Do you know what specifically they were concerned about as it relates to tariffs in a particular part of country, agriculture, et cetera?

Mr. POWELL. I shouldn't speak for them, but I think it is really a general thing. The bottom line is a more protectionist economy is an economy that is less competitive, it is less productive. We know that. This is the torch we have been carrying around the world for 75 years.

So it is not a good thing, if that is where this goes. We don't know ultimately yet where this will lead. The Administration says they want lower tariffs, and that would be good for the economy, if we achieve that.

Ms. WATERS. Well, thank you very much.

And I yield back the balance of my time.

Chairman HENSARLING. The gentlelady yields back.

The Chair now recognizes the gentleman from Kentucky, Mr. Barr, Chair of the Monetary Policy and Trade Subcommittee.

Mr. BARR. Thank you, Mr. Chairman.

Chairman Powell, welcome back to the committee.

Some economists argue that a flattening of the yield curve is an indication that an economy is headed for a recession. Obviously, with the strong data that we are seeing, we don't see any indication of a recession in the near-term.

But I asked you this question 6 months ago in your last report, and I asked you, given the flattening of the yield curve and the risk potentially that short-term rates might exceed long-term rates, whether there would be any plans within the normalization strategy to accelerate the roll-off of longer-term assets more quickly to counteract the flattening of the yield curve? I believe you indicated that there were no such plans 6 months ago.

I just wanted to ask you, given the fact that that yield curve has flattened even further in the interim, since we last met, is there any discussion within the FOMC to alter or accelerate the balance sheet reduction program in contemplation of this flattening yield curve?

Mr. POWELL. Thank you.

No, there is not. We very carefully developed and socialized to the public the balance sheet reduction, balance sheet normalization plan. It is working smoothly. We are not thinking really about changing it, except in the conditions that we have identified, which would be a meaningful downturn.

Mr. BARR. If that is the case, what are the Fed's plans with respect to that flattening yield curve? And what risk does that pose to the economy?

Mr. POWELL. Maybe let me tell you how I think about the yield curve.

We know why the short end of the yield curve is moving up. It is because essentially out to 2 years or so really the market is pricing in its expectations of what the Fed will do, plus or minus maybe a little bit of a term premium when you get out to 2 years. So we know why the short end is moving up.

The real question is, what is the story with long rates? So the long rate, like take the 10-year Treasury, you have to decompose that and ask what is in it.

And I think the whole point of the yield curve conversation is that you can decompose that, and in that, whatever the long-term rate is, 2.85 percent this morning, 10-year—what is in there is a term premium. But there is also the market's estimate of the long-run neutral rate. And so it is telling you something and we are listening.

But it involves many other things. You have to do a decomposition to pull that out. And then that tells you what the stance of monetary policy is. So whether a policy is accommodative or whether it is restrictive. And that is the important question, not the shape of the yield curve.

Mr. BARR. Chairman, would you agree that the oversized balance sheet is putting downward pressure on those long-term interest rates, continues to put downward pressure?

Mr. POWELL. Yes, but to a diminishing degree.

Mr. BARR. Let me switch gears to IOER. For decades now the Board of Governors has administered interest rates on reserves, not for the intended purpose of fairly compensating commercial banks for required deposits at Federal Reserve banks, but rather as a monetary policy rate.

Given the fact that IOER is now your principal tool for interest rate setting, would it not be better if IOER was set by the FOMC, a much more diverse body that includes not only the Governors, but also the five voting district bank presidents, as opposed to just the Board of Governors?

Mr. POWELL. I guess I would—I think of it this way. The FOMC sets the target range for the Federal funds rate. IOER is just a tool to make sure that the Federal funds rate trades in the range that has been set by the FOMC. So it is really just a tool to follow through on the much more important decision which is made by the FOMC.

Mr. BARR. Well, thank you. This committee and the Congress is considering a proposal to transfer that responsibility of IOER to the FOMC, the larger, more diverse group, and we continue to engage you on that.

Let me finally conclude with a question about trade. I agree with your assessment that free trade and low tariffs result in better economic performance as opposed to a trade war or high tariffs.

How important is it for the Administration to quickly resolve its trade and tariff negotiations? And what are the risks of a protracted period of increasing tariffs?

Mr. POWELL. Again, wanting not to be an adviser or in any way a participant in these discussions, which are really up to the Administration, uncertainty is one of those things where businesses—there was a lot of momentum in the economy earlier this year. I wouldn't want to see uncertainty lead people to start putting off decisions, and that would be the risk of a long, protracted discussion.

Mr. BARR. Thank you for your answers.

I yield back.

Chairman HENSARLING. The time of the gentleman has expired.

The Chair now recognizes the gentlelady from Wisconsin, Ms. Moore, Ranking Member the Monetary Policy and Trade Subcommittee.

Ms. MOORE. Thank you so much Mr. Chairman.

Again, welcome back, Mr. Chairman.

You talk a lot about productivity, and indeed economists keep talking about an aging population, the boomers, and that is impacting productivity, and how lagging productivity is an ongoing drag on economic growth.

I an wondering if you think that having a comprehensive immigration policy would help increase productivity?

Mr. POWELL. Immigration is another one of those policies that is high up on the list of things that are not assigned to us, but I can—I can still—so I am going to try to stay in our lane.

But I do think to the extent these issues connect to the health of the economy in the long run, then we have an obligation to speak to that.

So you think about potential growth in the United States, you can really boil it down to how fast is the labor force growing and how much is output per hour growing. That is it, that is all you have.

Ms. MOORE. Our CRS does anticipate that over the next decade or so it could increase our economy by a trillion dollars to get these people out of the shadows.

You talk in your remarks about the lower unemployment rates for African Americans and Hispanics. That is something we are all celebrating. But I swear to you, I know a lot of African Americans, I am related to them, I don't know many that don't have two jobs in order to make it. I know some who have bachelor's degrees, and yet they are forced to live with roommates because they can't sustain themselves.

So what we have found is that while there might be lower unemployment, wages have actually decreased, despite the tax cuts, which claimed that there were going to be $4,000 for everybody, we know we got these one-time-only bonuses.

Wages have decreased and income equality has increased. And I am wondering what your projection is for flat or lowered wages despite increased unemployment.

Mr. POWELL. We look at a wide range of wage and compensation indicators, and pretty consistently across the board, if you look back at where they were 5 years ago and look back where they are now, they have all moved up. They used to be right around 2 percent increase per year. Now they are around 3 percent. We think this is a good thing.

Ms. MOORE. So African Americans, their wages are increasing?

Mr. POWELL. Yes. I think it is pretty broad at this point in different—

Ms. MOORE. And I would surely like to see these data, because other economists have said that it has actually decreased. All right. Thank you.

I am wondering—I know you aren't going to ask any questions about the tax cut, so I'll let you off—I am wondering, though, about the big tax cut, I have to ask, the big tax cut that we just provided and it has increased income inequality.

I am just wondering what your thoughts are and projections about how sustainable that is when 80 percent of these tax cuts have gone for shareholder type buybacks versus increase in wages or capital improvements. I am wondering what do you think going forward, what impact that will have on economic growth.

Mr. POWELL. U.S. Fiscal policy has been on an unsustainable path for some time. It continues to be unsustainable.

Ms. MOORE. Higher debt?

Mr. POWELL. Yes. The debt is going up and I think it is growing faster than the economy. We need to get the economy growing faster than the debt, it comes down to that, and we are not doing that. It is something we should be working on now. We should all be working on that together.

Ms. MOORE. Do you think that shareholder buybacks is a healthy indicator of healthy prospect for growth?

Mr. POWELL. I think when a company decides to buy back stock, they are saying that we have more cash than we can put to work for our shareholders, that is the capital markets working. That money doesn't go away, of course, it goes into people who then can spend it or—

Ms. MOORE. This is more money for them to use to chase yield. Don't you think that the chasing of yield creates bubbles and that is one of big problems that we had in 2008, is money chasing yield?

Mr. POWELL. I think we certainly can find ourselves in a situation where we are seeing financial bubbles. We watch that very closely. Don't see that now, but it is a key risk that we monitor very carefully.

Ms. MOORE. And I thank you so much, sir.

Mr. POWELL. Thank you.

Chairman HENSARLING. The time of the gentlelady has expired.

The Chair now recognizes the gentleman from Missouri, Mr. Luetkemeyer, Chairman of our Financial Institutions Subcommittee.

Mr. LUETKEMEYER. Thank you, Mr. Chairman.

And welcome, Chairman Powell.

Yesterday we had a hearing with our Financial Institutions Subcommittee, and I asked the question of Acting Comptroller of the Currency, Keith Noreika, about the implementation about S. 2155, and specifically whether or not the statutory language around the $250 billion threshold for SIFI (systemically important financial institution) designation was clear. Mr. Noreika said that the language and Congressional intent were pretty straightforward.

And so my question to you is, would you agree with your former colleague that the language is pretty clear, no ambiguity there, that you know exactly what should be done with those banks under 250 with regards to SIFI activity and testing?

Mr. POWELL. I think that it is very clear and I think that the language gives us the authority that we need.

Mr. LUETKEMEYER. OK. So now we know what we should be doing. How long would you anticipate it is going to take to implement the statute with regards to 2155?

Mr. POWELL. So with regards to that particular provision, we are thinking already about exactly the framework we are going to publish for comment and receive public comment on that will allow us to identify systemic risk or risks to safety and soundness among banks below 250.

Some of the aspects of 2155 were already out of door. We published a document on Friday of July Fourth week which talked about many things that we are doing. We have a big job to implement 2155 and we are going at it very hard.

Mr. LUETKEMEYER. Thank you very much. And it is nice to know that—or it should be noted anyway—that those banks under 250 are not significantly important financial institutions from the standpoint of endangering the economy. That is what a SIFI is supposed to be, a bank that would endanger—while they are nice size banks, they are not something that is going to endanger the economy and therefore they fall under a different regulatory regime. So we thank you for that.

With regards to another issue I brought up yesterday, former Governor Dan Tarullo said in his farewell address that stress testing programs should be moved into the normal examination cycle. And I agree with that proposition and said while I don't underestimate the importance of stress tests, those tests should be run by regulators. Banks are doing this right now on a regular basis with regulatory oversight.

Would you agree with Governor Tarullo that we need to assimilate those exams, the stress testing things into the regular examination cycle, or do you want to retain those as a separate type of testing that the banks are going to be putting out information for and modeling?

Mr. POWELL. I believe he was talking about the qualitative aspect, so we are looking to return the qualitative part of the test over time to the regular examination cycle. And we are looking for the right way and time to do that.

Mr. LUETKEMEYER. Well, it seemed to me, just to throw ideas out, that it would seem to me if the Fed would have several different models and then they would go into the bank, take the information from it, throw it into those models, to see once if there is an area within the bank's business model that is of concern, that could be pointed out by the various models and update those models on an annual basis or whatever it would take.

It seems to me like now the stress testing is a game of "gotcha." The models are not disclosed until the very last instance. And then are the models going to actually be useful?

So I would hope that you would think along those lines, that you could assimilate it into part of the examination process, take the information and put it into several different models to see once if there is a weakness somewhere in the bank's business model. Does that make sense?

Mr. POWELL. Yes. We are working hard to make the quantitative side of the test and the qualitative side more transparent to the public generally and to the firms, and we think that is a key innovation. We have a proposal out on that.

Mr. LUETKEMEYER. And one of the things also with regards to international banks, I have had some visits from our friends across the pond recently. And so while I am a staunch advocate for capital, I am also concerned about this notion that arbitrarily parking capital around the globe creates a safer financial system.

The Fed started this trend with FBO rule, something I pointed out to Chair Yellen during her tenure. Now Europe is following suit with the immediate parent undertaking rule, which will hit the U.S. and ultimately U.K. banks. It seems as though we are finding ourselves in a global back and forth here with regards to capital. Would you agree with that? Or what are your comments?

Mr. POWELL. I think we feel like our intermediate holding company regulation is working. It has settled down now and it is working. We have been consulted as Europe has looked at something similar to that. And I think the last time I checked we felt that our concerns were being reasonably well addressed. I will look back, though, to make sure that is right.

Mr. LUETKEMEYER. One of the questions I got yesterday from a group of politicians from Europe, was with regards to equivalency. And I am not a big fan of that from the standpoint of with the equivalency rules and regulations, somebody wins and somebody loses. I am fearful that we are going to lose in that situation. So just to comment.

Thank you very much for being here.

I yield back.

Chairman HENSARLING. The time of the gentleman has expired.

The Chair now recognizes the gentleman from Missouri, Mr. Cleaver, Ranking Member of our Housing and Insurance Subcommittee.

Mr. CLEAVER. Thank you, Mr. Chairman.

And thank you for being here, Mr. Chairman.

Last week we were here having a conversation with Secretary Mnuchin, and when I raised issues, they related to the fact that I represent a rural part of the State of Missouri.

I had a townhall meeting in Higginsville, Missouri, 2 weeks ago and brought in the Canadian consul general to talk with the farmers in my district. Standing room crowd. Nobody in there supported what was going on.

Some of the farmers were questioning whether they should allow the beans to just stay in the fields this year, because, as you probably know, the price is continuing to fall since the tariffs were implemented.

First of all, I am concerned about whether or not the harm could spread and do damage to the economy. I know you were asked a similar question earlier, but it stands to reason that if the soybean crop is damaged, as it apparently is, there has to be a rippling effect.

And I am wondering, right now we are just talking mainly about some farm products from my State. I think China buys $60 billion a year in soybeans, just in soybeans, $60 billion from us, from the United States.

If you just deal with the $60 billion, is there cause to be concerned about the damage that other parts of the economy could experience?

Mr. POWELL. The answer would be yes. You are just beginning to see the retaliatory tariffs come into place, they are only just beginning. And so we hear a few reports here and there about this company and that company. The agricultural patch is clearly very seriously affected, but it is just beginning. So I think you want to be careful to walk on this path because it may not be so easy to get off it.

Mr. CLEAVER. I have a large rural part of my district, and then I have the largest city in the State, Kansas City, in my district. So I have talked about my farm problem. When I was mayor of Kansas City, I was successful in bringing Harley-Davidson to Kansas City, they built a plant, went up to 1,000 employees. We made an investment as a city. Of course, we are now facing the possibility of an empty building.

But the steel tariffs are going to also have a rippling effect. The SmootHawley Act is credited with making the Depression even worse. But I am just wondering if you are not going to answer this question, I understand it, so it is almost a statement, I have to say it.

So I think when decisions like this are made they probably should be made with the Legislative Branch of the Government because the issues are too significant for one human being on the planet. I don't care if it is a Democrat or Republican or a member of the Oakland Raiders. We are talking about the world economy being impacted and only one person has something to say.

Frankly, Congress hasn't spoken on issues like this since 1930. We have just been frozen out of the process on an issue that can impact the entire world.

Thank you for listening to me.

And I would also—just like to yield back, Mr. Chairman—I would also like to express appreciation that you speak English. When I was first elected to this committee a lot of people from the Fed didn't speak English.

Mr. POWELL. Thanks.

Mr. CLEAVER. Thank you.

Chairman HENSARLING. The Chair takes note that the Chairman of the Fed speaks English.

The Chair now recognizes the gentleman from Michigan, Mr. Huizenga, Chairman of our Capital Markets Subcommittee.

Mr. HUIZENGA. Thank you, Mr. Chairman.

Chair Powell, good to see you again.

And I think my friend from Missouri is very pleased for English versus economese or economistism or whatever you want to tag it with. But this clearly is some complicated stuff.

I have a number of issues I want to hit on very briefly. And one of them is just a simple thing, something that we had talked about with the FEC, the FORM Act bill that I had proposed previously.

We had a provision that we had put in there that each Federal Reserve Board Governor should be able to hire up to two senior staff members. And just wondering if you could maybe briefly comment on that or whether you have looked at that.

Mr. POWELL. I think it is a good idea. Don't need legislation on it. That is now the rule.

Mr. HUIZENGA. All right. Well, good, we are making progress already.

As Chair of the Monetary Policy and Trade Subcommittee, I had worked on monetary policy and the effects of that. Now as Chair of the Capital Markets Subcommittee, we still see a lot of that tie-in in the world economy and the health of what is going on.

I have real concerns about the Volcker rule situation. Last month the Fed, along with the other four Federal agencies, something that Mr. Quarles had called the five-headed hydra at one point. Had put some proposed rule changes in there.

And my understanding is that the goal of the new rule is to simplify the regime and make it easier on the regulators, as well as the regulated institutions, to identify proprietary trading while allowing banks to continue providing important market-making activities.

How do these reforms address the Volcker rule so that compliance can be streamlined, rules clarified, and markets actually made more efficient?

Mr. POWELL. I think for the smaller institutions we will be streamlining quite a lot.

Let me say, this rule is out for comment and we are very, very open to better ideas, how to do this better. But we want to stay faithful to Congress' intent, which is, these institutions, particularly the largest ones, should not have big proprietary trading businesses, shouldn't be doing proprietary trading as a business line.

Mr. HUIZENGA. I look forward to continuing to explore how the Fed and FOMC will be properly tailoring the Volcker rule. However, I have been hearing some complaints from some companies that the proposed rule, as introduced, has a new concept of using accounting rules to identify prop trading, which were not included in the original Volcker rule. I have been told that this could actually result in more activities getting caught up in the Volcker regime than there are pulled in today.

Can you please tell me how that result, to simplify the rule, appears to make it actually a little more cumbersome and complex? Again, my understanding is a new metrics regime could result in a roughly 50 percent increase in metrics reporting by the banks subject to the rule.

Mr. POWELL. That is not the intent at all. And I assume we are going to see those comments through the comment process, and believe me, we will give them careful consideration.

Mr. HUIZENGA. OK. And we are wide-ranging and far afield here on a number of issues.

My next issue, on page 39 in your report you had your chart about the rules. You mentioned this on page 5 of your testimony. You gave an update on monetary rule. This is a quote from your July Monetary Policy Report, gives an update on monetary policy rules and their role in our policy discussions.

I understand you have a series of rules that you reference as you are moving forward, including the Taylor rule, the adjusted, the Taylor rule as it is.

What is the balanced approach rule? I am not familiar with that. The balanced approach rule would have called for the most negative interest rates during the downturn. Could you unpack that a little bit?

Mr. POWELL. So each of the rules have an estimate of the neutral rate inflation, they have how far you are away from your inflation target and how far you are away from your unemployment target or your slack target.

What the balance rule does is, it doubles the coefficient on the slack target. So in this case unemployment. So the weighting is doubled. That is all it is.

Mr. HUIZENGA. And then real quickly, Chairman Barr had talked about the yield curve flattening. And I am wondering if there could be a circumstance when what might be good for the Federal Government, lower interest rates long term as we deal with our national debt load payments, frankly, might that not necessarily be beneficial for the overall economy?

Mr. POWELL. We are concerned with carrying out the mandate you have given us, which is maximum employment, stable prices, financial stability. We are not concerned with fiscal.

Mr. HUIZENGA. Do you have discretion as to whether to sell short-term versus long-term?

Mr. POWELL. Sure.

Mr. HUIZENGA. OK. And if you sell long—

Mr. POWELL. So we are not selling anything. We don't sell any assets. We let them mature.

Mr. HUIZENGA. OK. I will have to follow up with some written on that, because I am curious, if you did sell those long terms could the long-term rate go up.

Thank you, Mr. Chairman.

Chairman HENSARLING. The time of the gentleman has expired.

The Chair now recognizes the gentleman from Connecticut, Mr. Himes.

Mr. HIMES. Thank you, Mr. Chairman.

Chairman Powell, welcome. It is a pleasure for me to have this opportunity to chat with you. It is something I hope we can do on an ongoing basis in the future.

I want to use my 5 minutes to ask you about two specific risks and for your elaboration thereon. The first one is related to financial stability and stability in the overall financial system. I watched carefully the conversation you had with Senators Warren and Brown about capital.

I am actually interested in hearing you for a couple of minutes, because I do have two questions, elaborate on risks that we might not see coming, that aren't conventional capital risks.

So my concern of course is that we tend to get hit by the bullets that we don't see, and while we are focused on Volcker rule or capital, what happens, what comes upon us out of nowhere. These things tend to come with a speed and severity that we don't predict.

So what keeps you up at night that is not conventional capital ratio type issues? Is it student loans? Is it proprietary trading? Is it ETFs? Elaborate for me, if you would, on things that concern you with respect to stability in the banking system in particular.

Mr. POWELL. The clear answer to me from that would be cyber risk. We have spent 10 years building up capital, helping the banks be much more conscious of their risks, building up liquidity, stress testing all those things. And we have a really good playbook there. I think we carefully monitor all of the things that you mentioned, although some of them are worth talking about as well right now.

But the thing that is really hard, is the idea of a successful cyber attack. And we work hard on having a plan for that. The Administration plays a leading role in that. That would be the big one.

I think if you turn to traditional financial stability, we think that risks are at the normal/moderate level. You see some high asset prices. You don't see high leverage among households or among banks. You do see a little bit of high leverage in nonfinancial corporates, and that is something we are watching very carefully. But again, nothing really is flashing red in our observation of it in the financial market.

Mr. HIMES. Let me ask you to elaborate. You said there are some worth talking about, and then you highlighted asset prices. Which category of assets in particular were you?

Mr. POWELL. Just generally, you have had 10 years, almost 10 years of low interest rates and we are in the process of normalizing policy. Bond prices are high, equity prices—broadly speaking, commercial real estate prices are in the upper range, generally elevated. I wouldn't use the bubble word here, but I would say that many financial asset prices are elevated above their normal ranges and we will have to see.

Mr. HIMES. With respect to cybersecurity, which is where you started, what would you recommend to this body that we do as you do your reviews and whatnot, within the banking industry, what should Congress do to assist in the process of addressing cybersecurity risk?

Mr. POWELL. I would say as much as possible, and then double it.

So we do a great deal and it is about making sure the banks have basic plans in mind. A lot of it is just basic cyber hygiene and making sure that your systems, you are implementing the latest things that come out.

So—and I think planning for failure too is very important. That is what we do. We do everything we can to prevent a failure, but then you have to ask yourselves, OK, what would we do if there were a successful cyber attack. You have to have a plan for that too. So those are the things we are working on.

Mr. HIMES. OK. Let me ask you another category of risk that is maybe a little bit more sensitive. But like so many people, I scrutinize the words in this report—my words, not yours—very bullish on the economy. Careful on inflation. You note that inflation has moved up. Our challenge will be to keep it there.

I am reflecting on where we have been in the last 10 years in that regard. We saw a pretty substantial fiscal stimulus in 2009.

My friends on the other side of the aisle completely rejected Keynesian economics at the time and said that wasn't going to work. They then had an epiphany and embraced Keynesian economics around a $2 trillion deficit-financed fiscal tax cut at a time in which the economy was growing robustly. It has been a long time since I studied economics, but stimulus in the face of a robust economy concerns me from the angle of inflation.

You say that the 2 percent objective is symmetric in the sense of your concern. How would you divide the probability that we see upward trending inflation versus downward trending inflation going forward from this point?

Mr. POWELL. I would say it is roughly balanced. I think maybe slightly more worried about lower inflation still. But I think, for a long time, inflation was below target and we were pushing it. We have now just about reached a symmetric 2 percent objective, so it is very close. And I think from this point forward the risks are roughly balanced.

Mr. HIMES. Thank you. Thank you, Mr. Chairman.

Chairman HENSARLING. The time of the gentleman has expired.

The Chair now recognizes the gentleman from North Carolina, Mr. McHenry, Vice Chair of the committee.

Mr. MCHENRY. Well, Chair Powell, thank you for being here. I want to shift to cryptocurrency, which is a bit of your monetary policy hat, but also a bit of your regulatory hat. And I want to get your thinking along the lines of cryptocurrency.

So the Bank of International Settlements just released a report saying that cryptocurrencies were, quote: "a poor substitute for the solid institutional backing of money."

You have stated publicly that cryptocurrencies are currently not big enough yet to matter, or something along those lines. I would submit the report by the Bank of International Settlements misses the mark of the potential of blockchain, the potential of crypto, more broadly, but there is a great deal of interest in your views and Central Bank's views more broadly on cryptocurrency.

So can you just outline to me your thinking on cryptocurrency?

Mr. POWELL. Sure. So, first, I would say I think the question I was asked that you are referring to was, do cryptocurrencies currently present a serious financial stability threat. And my answer was they are not big enough to do that yet.

Mr. MCHENRY. Sure.

Mr. POWELL. That is really what I was saying, not that they are not a longer term thing. So they are very challenging because cryptocurrencies are great if you are trying to hide money or if you are trying to launder money. So we have to be very conscious of that. I think there are also significant investor risks.

Investors, relatively unsophisticated investors, see the asset going up in price and they think, this is great, I will buy this. In fact, there is no promise behind that. It is not really a currency. It doesn't really have any intrinsic value. So I think there are investor or consumer protection issues as well.

Another thing I will say is that we are not looking at this, at the Fed, as something that we should be doing, that the Fed would do a digital currency. That is not something we are looking at.

So mainly, I have concerns. If you think about what currencies do, they are supposed to be a means of payment and a store of value, basically. And cryptocurrencies, they are not really used very much in payment. Typically, people sell their cryptocurrencies and then pay in dollars.

In terms of a store value, look at the volatility. And it is just not there.

Mr. MCHENRY. Well, has there been discussion with other G7 central banks along the lines of cryptocurrency?

Mr. POWELL. It comes up a lot, yes. I am only just starting to go to G7 meetings, but it comes up quite a bit in international forums of various kinds.

There is a broad concern that the public needs to be well informed about this, again, the money laundering and terrorist financing and all of that is a big risk.

Mr. MCHENRY. It is a big risk, but is there any conclusion that you are hearing or is it just a broad concern?

Mr. POWELL. Well, I think the BIS report and others have called out these risks and called on the appropriate regulatory bodies to address them.

We don't have jurisdiction over cryptocurrency. We have jurisdiction over banks. And so we know in their activities with cryptocurrency companies and cryptocurrency, we can address that. The SEC can address the investor protection aspects of it.

Mr. MCHENRY. But you don't see this as impairing your ability to act on monetary policy just given the current shape and scope of the size of the market?

Mr. POWELL. Really not at all today.

Mr. MCHENRY. OK. We currently have some level of framework around regulation of cryptocurrency. You have a money service license at the State level. In our 50 States, they all have some requirement. So there is a great look into that conversion, the movement of cash into cryptocurrency or out of cryptocurrency back into cash. We have some element of regulation of the CFTC and the SEC. So there is some broad framework of it, but not a concerted effort by the Federal Government to understand what is happening in cryptocurrency.

Do you have any staff resources devoted to figuring out cryptocurrency or following cryptocurrency?

Mr. POWELL. Yes. So we have looked at it carefully. I spoke about it. Other Governors have spoken about it, Reserve Bank presidents. Certainly, we have work going on. But, again, we just don't have regulatory authority to deal with it, so I think that is the key thing, is to be looking at the places where there is that regulatory authority.

Mr. MCHENRY. Thank you, Chairman.

Chairman HENSARLING. The gentleman yields back.

The Chair now recognizes the gentleman from California, Mr. Vargas.

Mr. VARGAS. Thank you, Mr. Chair.

First of all, I would like to thank you for one thing that is obvious, and that is that you haven't gotten yourself in trouble. You have been a great public servant, and I really appreciate that.

Mr. POWELL. Thank you.

Mr. VARGAS. Unfortunately, you shouldn't have to say that these days, but you really do, with what we have seen recently.

I do want to ask a little more about cryptocurrency, however. You talked about terrorism and you also talked about hiding money.

I had a bill here with a colleague of mine on the other side exactly on that point. And I would like you to go a little deeper on that.

You said it is not an issue yet because it is not large enough, but it does seem to be growing. And you said you also have jurisdiction, you have jurisdiction over the banks. Should you have jurisdiction here, cryptocurrency?

Mr. POWELL. That is a deep question. We are not seeking it.

Mr. VARGAS. But should you?

Mr. POWELL. I am not going to say yes today. We are not looking to—it is right in the middle of the SEC's turf, the investor protection aspects of it. I think, Treasury and FinCen and other people have—I think it should be well regulated. I don't really see us as probably the right group to do that.

Mr. VARGAS. But it seems to me right now, that no one seems to have quite a hold on it either. It seems to be this amorphous blob that is moving around. You talk to the SEC and they, at the same time, kick the ball around also.

Shouldn't there be a more concerted effort to try to figure out who is in charge here of cryptocurrency? Because I think that there are lots of opportunities here for, not only terrorism, but also for drug trafficking, sexual exploitation, human trafficking. You said terrorism, but all sorts of bad actors can use this. And I don't think that we have a good hold on it yet.

Mr. POWELL. I think it is a good idea to focus on getting the regulation at the Federal level of this right. Again, we are not seeking that at the Fed. And I know Treasury has done some thinking on this. This would be an area where they would have the lead to identify the right regulatory structure. They may have already published something on this. I am not sure.

Mr. VARGAS. In fact, part of the bill asks them to speed that up and to report back to us.

I do want to ask you also about the issue of wage increases. You said that there has been some movement upwards, 2 percent, 3 percent. I think you said 3 percent, so it is beating inflation. But the question was then specifically on people of color, African Americans and Latinos. You said you had some breakout numbers for those.

Mr. POWELL. Not handy, I don't. I can get those for you.

Mr. VARGAS. OK. I would be interested in that, because I see the same situation in California where you have people that have been underemployed working very, very hard, two and three jobs, and they continue to say that they haven't seen that wage increase yet.

We have seen, for sure—I think you are correct about the unemployment go down, but we haven't seen yet, certainly not in my district in any measurable way, the increases in wages.

Mr. POWELL. Wages in general have been somewhat slow in moving up and as the labor market has tightened. We understand that really matters to people, people's lives a lot.

Mr. VARGAS. Yes.

Mr. POWELL. And we do see the moving up in the aggregate, but I will be happy to supply.

Mr. VARGAS. You said there was an issue of productivity, because maybe this time the reason the rates haven't increased as much is because of productivity. Could you talk about that for a second?

Mr. POWELL. Sure. So over a long period of time, wages really can't forever go up faster than productivity.

Productivity is slow, but there is a reason for that. And that is, after the financial crisis—there are many reasons for it—after the financial crisis, though, companies didn't invest much because there was no need to or there wasn't demand, the economy was weak. And so weak investment casts a shadow over productivity growth for a number of years.

So we are still—investment has now popped up. Investment was strong in 2017. That continues in 2018. That is really important, and we are glad to see it, but it may take some time to show up in higher productivity. It is not because people aren't working harder. It is because you need those information technology and other tools to be more productive.

Mr. VARGAS. And again, with the last moments that I have, I just want to thank you again. The way you have comported yourself, the way you have been open to talking to people, the confidence that we have in you. I think the American people really need, at the moment, someone like yourself that we can look up to and say you are not involved in any scandal, you are not involved in any other thing out there that would lose confidence. It is just the opposite. And I want to appreciate that and thank you for that.

Mr. POWELL. Thank you, sir. I will try to live up to that.

Mr. VARGAS. I hope you do.

Chairman HENSARLING. The gentleman yields back.

The Chair now recognizes the gentleman from Wisconsin, Mr. Duffy, Chairman of our Housing and Insurance Subcommittee.

Mr. DUFFY. Thank you, Mr. Chairman.

And thank you, Mr. Powell. Some of my colleagues on the other side of the aisle have discussed harmful economic policies. Some in their opening statements, specifically.

So if you look at the harmful economic policies that have taken hold over the last year and a half, so President Trump has worked hard to streamline and reduce regulation. We had a historic tax cut. We have tried to rebuild our military. We have pushed for American energy independence.

When you take together all of, I would quote, "those harmful economic policies, what has that actually done for the African-American unemployment rate in America?"

Mr. POWELL. As I mentioned, I think—

Mr. DUFFY. Is it going up?

Mr. POWELL. It is going down significantly.

Mr. DUFFY. Say that one more time. What has happened to African-American unemployment?

Mr. POWELL. It is come down quite a bit.

Mr. DUFFY. It is come down quite a bit.

How about the Hispanic unemployment rate? Has that gone up under these harmful economic policies?

Mr. POWELL. It has come down quite a bit.

Mr. DUFFY. It has come down quite a bit.

So is it fair to say these policies actually aren't harmful? They are actually growing the economy. They are putting people back to work.

Is that a fair assessment, Mr. Powell?

Mr. POWELL. It is fair to say that the unemployment rates are very low and a lot of things go into that.

Mr. DUFFY. So you wouldn't say today that it has anything to do with regulation or tax?

Mr. POWELL. I am reluctant to get into the credit assignment game. It is really not up to us. I can report on the economy, but I do think that—

Mr. DUFFY. But you report on the economy and you look at all the different factors that come into play in the economy.

Mr. POWELL. Yes.

Mr. DUFFY. So have these factors had anything to do with the growth that you have seen in this economy?

Mr. POWELL. So I attribute declining unemployment to positive surveys among businesses, really they feel good about the business climate.

Mr. DUFFY. Why do they feel better about their businesses, Mr. Chairman? Because they get to keep a little more of their money? Is that possible, maybe?

How about if instead of having to navigate government rules and regulations, they actually get to focus on running their business. Could that attribute to the positive view they have on the economy and their businesses?

Mr. POWELL. I think you have seen very positive business confidence surveys.

Mr. DUFFY. So I will take it that you are not going to answer my question. I understand the position and what you said.

I want to talk to you about trade. I am a free trader like you are. I think free trade is great for our economy. But I also think that if you don't have fair trade, if you have deals with places like China where you have American companies that invest millions or billions of dollars in their technology and you do business with China and they steal it from you, and/or they subsidize their companies that come and do business in America where we have, for the most part, free trade ourselves, where we actually can't—they have barriers to American-produced goods, how long does that relationship last where our economy is open and theirs is closed? Does that set us up for a long-term successful economy as it relates to China?

Mr. POWELL. I strongly agree with you that trade needs to be fair as well as free.

Mr. DUFFY. Is it fair now?

Mr. POWELL. Well, I think—so if you look at the rules-based postwar system, it has consistently resulted in lower and lower trade barriers.

Mr. DUFFY. No. Our relationship with China, is it a fair trade—do we have a fair trade relationship with China?

Mr. POWELL. I think it is very clear that some countries, and China in particular, have less open trading systems than we would like.

Mr. DUFFY. It is not fair.

Mr. POWELL. And it is inappropriate for us to address that.

Mr. DUFFY. And so do you think it is easier to deal with China 15 years from now when their economy is that much larger and stronger or maybe their military is larger and stronger than it is today?

Mr. POWELL. That is really a judgment for the people who have responsibility for trade.

Mr. DUFFY. I would agree with that.

I am going to quickly turn to the President's America First policy. Do you agree with that?

Mr. POWELL. Maybe you could be more specific.

Mr. DUFFY. Do you think we should put American interest first? Do you think we should look out for the global interest or American interest?

Mr. POWELL. We work under a statute that has us focused on maximum employment and stable prices here in America.

Mr. DUFFY. Maximum employment for Americans, not for the globe.

Mr. POWELL. Here in America.

Mr. DUFFY. So we are looking out for Americans.

Mr. POWELL. Of course, we live in a global economy where the global economy affects that.

Mr. DUFFY. That is true. But we go to the global economy, but always how it affects our own—

Mr. POWELL. Entirely domestic. Our goals are entirely domestic.

Mr. DUFFY. Do you believe the U.S. insurance companies are well capitalized and solvent today?

Mr. POWELL. Yes.

Mr. DUFFY. Do you believe that our system of regulating American insurers has worked well over the last 150 years?

Mr. POWELL. I can speak to the last decade or so, and I would say yes.

Mr. DUFFY. Pretty good, huh?

Mr. POWELL. Yes.

Mr. DUFFY. So would you agree that we should not enter into any international agreement or standards that would undermine our U.S. insurance regulatory system, State-based model?

Mr. POWELL. Yes, I would.

Mr. DUFFY. Great. My time is up. I yield back.

Chairman HENSARLING. The time of the gentleman has expired.

The Chair now recognizes the gentleman from California, Mr. Sherman.

Mr. SHERMAN. I commend the gentleman from Wisconsin and the Chair of the Fed for their comments about insurance. And I will probably disagree with many other things.

Thank you once again for returning where you will be independent and accountable, tall and short, the Fed plays an interesting role.

First as to cryptocurrencies. You and we should have the courage to ban them. As an investment, they are an investment with no investor protection, and they take the animal spirits, the willingness to invest, divert them from the real economy, and instead engage in what is basically gambling. Many jurisdictions support gambling only if there is local taxation, but cryptocurrencies don't pay gambling taxes.

As a medium of exchange, cryptocurrencies offer no advantages over regular currencies, unless you are a terrorist, a narcotics dealer, or a tax evader. There is no positive role for us for cryptocurrencies.

A lot of discussion in here about who deserves credit for the good economy. Let me point out, since Dodd-Frank, 17 million jobs have been created; 15 million of them under Obama, 2 million under Trump. That is 15 million, 2 million. That's the right ratio.

Now, the Trump Administration claims credit for the last 3 months of the Obama Presidency, but Obama was actually president until January 2017, but his policies remained in force all through 2017. Dodd-Frank, Janet Yellen's balance sheet, and Obama tax policies were in force until the beginning of this year. And in fact, the Fed policies and the securities regulation remained pretty much unchanged since the Obama Administration.

The chairman of this committee urges you to abandon all of the unconventional tools, while taking credit for the good economy that is in part a result of your unconventional tools.

I would say keep your balance sheet as big as it was when we achieved the economic growth that is so good that Democrats and Republicans are fighting over who gets credit, and certainly do not cut your balance sheet until Chairman Hensarling tells you how he is going to increase taxes to replace the $80 billion of profit you gave us last year because you had a big balance sheet.

The Chair talks about the inflation rate, the Chair of this committee. You ought to have a goal of 2–1/2 percent, not 2 percent. The law that we passed in 1978 draws a 3 percent objective or maximum for inflation and for unemployment. So unemployment is still too high and inflation is too low, and if we have a looser economic policy, maybe we will get somewhat higher inflation and the labor shortage necessary to increase wages.

He puts forward the idea that somebody would save for their daughter's college education by putting money aside in a mattress where its value would decline by 30 percent by the time his young girl got to college.

I would say if you are smart enough to save for college education once your daughter is born, you are probably smart enough to invest the money in something that grows faster than inflation.

As to trade, my party suffers from Trump derangement syndrome which is, whatever Trump does, we have to be the opposite.

The fact is China launched this trade war against us in the year 2000, right after two-thirds of Democrats voted against giving China most favored nation status. We were right then; we shouldn't change now.

There are those who say that trade deficits don't have a harm. They lead to hollowed-out manufacturing, which leads to manufacturing towns where you have opioids, alcoholism, and votes for Donald Trump. Three terrible scourges that hit the Midwest.

As to your testimony, Mr. Chairman, you say that wages are growing a little faster than they did a few years ago. That is nominal wages. Real wages, if anything, have stagnated over the last year, depending upon your measure of inflation. One more reason for a looser monetary policy, faster economic growth.

And believe it or not, I have a question, that is, LIBOR was tainted by scandal. You have the alternative reference rates committee. Most of the LIBOR referenced debt is derivatives, but what really matters to people is mortgages. And what are you going to do to make sure that the new benchmark doesn't increase mortgage bargaining costs or disrupt the mortgage market? That is the one question.

Mr. POWELL. That is a great question. So you are right, many, many mortgages reference LIBOR. LIBOR is a rate that is under a lot of pressure. It may not be there in 3 or 4 years, so there is a big move to find a good backup. We have identified a backup, and it is not designed to represent an increase at all in people's mortgage costs. Rather, it is designed to represent just a more sustainable rate that will always be there and less volatile and more predictable, more reliable.

Mr. SHERMAN. And it will be as good for mortgages as it is for derivatives?

Mr. POWELL. Yes.

Mr. SHERMAN. Good.

Mr. BARR. [presiding]. The gentleman's time has expired.

The Chair recognizes the gentlelady from Missouri, the Chair of the Oversight and Investigation Subcommittee, Mrs. Wagner.

Mrs. WAGNER. Thank you. I thank the Chair. And welcome, Chairman Powell.

In comments that you made shortly after being sworn in as Chairman of the Federal Reserve, you noted that you were committed to, and I quote: "explaining what we are doing and why we are doing it, and will continue to pursue ways to improve transparency both in monetary policy and in regulation."

Sir, how much value do you place on being as open and transparent as possible so that, not only Congress, but the American people understand the decisions the Fed is making, why they are making those decisions? I am just interested in what that kind of transparency and openness looks like.

Mr. POWELL. I think it is our obligation to explain ourselves. What we do is very important, sometimes not well understood. And it is really on us to explain what we are doing with financial regulation and monetary policy.

We have this precious grant of independence. We have to earn it by being accountable, and the way we do that is through lots and lots of transparency. I see myself as following in the footsteps of three prior chairmen who worked on this: Greenspan, Bernanke, and Yellen.

Mrs. WAGNER. When you say transparency, what are we talking about in a specific fashion?

Mr. POWELL. So we doubled the number of press conferences.

Mrs. WAGNER. OK.

Mr. POWELL. I will have a press conference after every FOMC meeting. That is, in monetary policy, that is a way for me to get out and talk about what the committee did at each meeting and communicate to the public in a comprehensible way.

I have also focused very much on communicating in terms that people can understand generally, not just economists. There is a very small professional audience that understands what we do very, very well—economists on Wall Street. And I think the rest of the country needs to be let in on this too, and I am trying very hard to do that.

Mrs. WAGNER. I absolutely agree, especially in this era where we have a savings crisis and people need to understand the movements that you make as Fed Chair, how it relates to monetary policy and how it affects them and how they invest for their future.

So I absolutely applaud your efforts in terms of press conferences, but also trying to shape the vernacular so that everyday low- and middle-income investors and savers in this country can understand what your policy actually means to them personally.

In 2012, the Fed dealt with a leak of confidential information relating to the deliberation of the Federal Open Market Committee, FOMC. Access to that information is valuable to markets and investors because the Fed does not make clear what it is likely to do in the future.

The committee believes that a monetary policy rule would provide the public transparency into future monetary policy decisions and eliminate the value of leaks.

Again, you have talked a lot about being transparent, and we have discussed it here previously, but you are the new boss. And what is going to change on the issue of securing some of that confidential information and transparency to prevent this going forward? And then also, when will the board improve its internal governance, so episodes like these don't repeat themselves, sir?

Mr. POWELL. We take the confidentiality of our deliberations very, very seriously as you, I am sure, know and would imagine. We remind every person who has access to FOMC information, including all the participants, but also all the staff every year have to review those rules, have to signify that they understand, have read them, and are bound by them.

So we do all of the things we can humanly think of to make sure that people understand their obligations to confidentiality. And I think—

Mrs. WAGNER. If I could interrupt, sir, as Chairman of the Oversight and Investigation Committee, we have looked into this specific leak. We have had difficulty receiving specific information about your internal governance and exactly how it is that we make sure these episodes don't repeat themselves.

I would like your brief comments on that, and also want to work with you to make sure that we are receiving the information in our role of oversight and investigation into these kinds of matters.

Mr. POWELL. I will be happy to take that offline and talk to you about it.

I don't know what you are referring to about information you can't get. Obviously, there is a lot of confidential information that we don't release that we try to protect, but in terms of our procedures and the kinds of things that we do, I would think that is the kind of thing we—

Mrs. WAGNER. Specific to improvements of internal governance, I believe, so—

Mr. POWELL. OK.

Mrs. WAGNER. I thank you. I look forward to following up with you.

Mr. Chair, I yield back the remainder of my time.

Mr. BARR. [presiding]. The gentlelady's time has expired.

The Chair now recognizes the gentleman from Georgia, Mr. Scott.

Mr. SCOTT. Thank you, Mr. Chairman.

Chairman Powell, welcome back again. And I want to thank you for spending some private time with me. We had a wonderful discussion and covered a lot of territory when you were here last.

But I watched your testimony over in the Senate yesterday, and I want to clarify something with you. You talked about the regional banks, those banks that are between $100 billion and $200 billion in range. And you talked about Senate bill 2155, which I supported very strongly, and we got good support on, in terms of the banking regulations.

But in Senate bill 2155, we gave you, the Fed, substantial authority through rulemaking to tailor regulations for these mid-sized banks, for these important regional banks.

And I watched the testimony, and you reassured the Senators that the Fed wasn't going to just flip the switch off on a bunch of the enhanced prudential standards, but instead would diligently work through a thoughtful and careful rulemaking. And I was very pleased to hear that.

But I want to get some clarifying information from you. Because Georgia, as you may know, is the home of a couple of these very important regional banks: Regents Bank and SunTrust Bank.

And the question is, do you envision the end product of this thoughtful and diligent rulemaking process to be a set of enhanced prudential regulations to the SIFI banks that is drastically different than those of the G-SIBs or the global banks?

Mr. POWELL. I anticipate that we will begin by identifying and then putting out for comment a framework that we will use to assess financial stability and safety and soundness risks of those institutions from $250 billion down to $100 billion. And then we will take comment on that and then we will go ahead and move forward with a framework.

And I anticipate that many of the factors that are used to identify the SIFIs will be used in this context as well. We are still working on exactly how to think about it. We have great flexibility under the law, which we appreciate, and we will be coming forward with something on this pretty quickly, I think.

Mr. SCOTT. Do you see any problem areas that these mid-size banks or regional banks might have to be concerned about? Or do you see a clear field here?

Mr. POWELL. Well, I guess I would just say we are going to go ahead and do what the law asks us to do. I don't see why anyone should be concerned about that.

Mr. SCOTT. Good. Wonderful. That is good to hear. Those banks, all our banks are very important. But we have so many different sizes, we have to make sure there is a level playing field for all of them.

Now, let me ask you this question. One of your fellow Cabinet members was here, the Treasury Secretary. And we got into discussion on the trade situation. So I want to ask you a question that I asked him, and I am hoping I will get a different answer.

And that is this: Are we or are we not in a trade war?

Mr. POWELL. Let me say, of course, as an independent regulatory head, I am not a member of the Cabinet. And also, I am not at an independent agency that has any authority over trade, so—

Mr. SCOTT. Yes, but the reason this is so important, you may not be a member of the Cabinet, but let's face it, Chairman Powell, when you sneeze, Wall Street gets pneumonia.

Mr. POWELL. It is better than the other way around.

So on this, we do have responsibility for the economy, and to the extent we see—

Mr. SCOTT. But my timing is coming up, I need an answer. Are we or are we not in a trade war?

Mr. POWELL. It is just not for me to say. Sorry.

Mr. SCOTT. Well, Mr. Powell, you are our anchor. You are, as the head of the Federal Reserve, the fulcrum of our economic system. And on top of that, I talked with you, and you are a very learned intelligent person, and you do have a very important opinion that the people of this Nation will want to hear from you. Are we are or are we not in a trade war?

Mr. BARR. [presiding]. The gentleman's time has expired.

The Chair now will recognize the gentleman from Oklahoma, Mr. Lucas.

Mr. LUCAS. Thank you, Mr. Chairman.

Chairman Powell, you are my fourth Chairman of the Federal Reserve that I have had the opportunity to interact with as a member of this committee. And I have over time come to appreciate that the best use of my time perhaps is to focus on more specific issues since my friends are very broad sometimes in their inquiries of you.

So I would like to ask you about the recent proposal the Fed released with other agencies regarding the Volcker rule. And while a great deal of attention has been paid to proprietary trading restrictions, I would like to focus on the manner in which banks have been restricted from making long-term investments in small businesses, startups, merging growth sectors as a result of the covered funds provisions.

I can understand that the agencies want to ensure that banks cannot evade the trading restrictions of the Volcker rule through certain private funds, but I am concerned that the agency's interpretation of the restrictions on investing in funds that facilitate capital formation has resulted in prohibitions on an activity that we want banks to engage in, such as making long-term investments in American companies to help them grow.

These restrictions cut off as a source of capital where they are both needed and important to economic growth. And I will note that the venture capital groups also share my reservations, and Comptroller Otting testified last month that bank lending provided key funding to small businesses by investing in these funds.

Do you have any plans to modify the scope of the restrictions on banks' long-term investments in covered funds so that the banks are able to serve as an important source of capital to these funds?

Mr. POWELL. We put out that proposal and we are very eager to hear comments on that. I think we are bound by what the statute says, but within that, we don't see it as an activity that typically threatens safety and soundness. We would be willing to do whatever we can within the statutory language and intent to accommodate that activity.

Mr. LUCAS. I am going to define that as a very positive answer. And in the respect for my colleagues, yield back the balance of my time, Mr. Chairman, while I am ahead.

Mr. BARR. [presiding]. The gentleman yields back.

The Chair now recognizes the gentleman from Texas, Mr. Green.

Mr. GREEN. Thank you, Mr. Chairman. I thank the Ranking Member as well, and welcome the Chair back to the committee.

I want to thank you for this effort that you are making to talk to Members of Congress. I think it is important for you to hear from us, and I appreciate greatly your outreach. Also appreciative that you have made some reference to African-American unemployment in your statement for the record. I think that is important as well.

And like many, I salute the notion that African-American unemployment is low, comparatively speaking. But I still am concerned about the historic position that it continually occupies in that of being twice that of White unemployment, generally speaking. Sometimes a little bit less, sometimes a little bit more. And to this end, you and I will continue our interaction about this to see if there are some things we may be able to do collectively to have an impact.

I want to move quickly to something related to the United State of Texas and tariffs. Texas is the 10th largest economy in the world. And based on GDP, it is, of course, our Nation's top exporter. In Texas, we export 42 billion in goods to China, second only to Mexico. Half of the U.S. cotton exported to China comes from Texas.

While you have not captioned it, you have not styled it as a trade war, I assume that you would say there is a dispute. And this trade dispute is having an impact on people in Texas. But I would like for you to give your thoughts on how it will impact middle class Americans, if you would.

Mr. POWELL. Sure. So I think as it relates to China, it is appropriate to address the problems with China's trading regime as well. That is a very appropriate thing for the U.S. to do, and we have been doing it for a long time and I think it is something to carry on.

Again, we are not in charge of trade, but I think it is hard to know exactly where this process goes. If it goes to a place where we lower trade barriers elsewhere and U.S. trade barriers go down, then it might be worth paying a little bit of a short-term price to get to that better place.

Lower trade barriers, lower tariffs help our economy over time. They make for a better, more productive economy, higher incomes.

They don't help every single group, and we need to do a better job of addressing the groups that are not helped by trade.

I think if you go more broadly in a more protectionist direction over time, for a sustained period, that is bad for our economy. That will mean lower incomes and lower productivity and I just hope it doesn't go in that direction. But I think it is hard to say where it goes from here.

Mr. GREEN. Well, we do have Canada and European allies engaged in the dispute currently, so it is a little bit bigger than China. To what extent it will grow is, I suppose, to be seen. But given that it seems to be consuming other nations as well, how, again, will this impact middle class people, assuming that we continue along the path that we are going?

Mr. POWELL. I think an open trading system worldwide with low barriers is good generally. It creates rising incomes for middle class people and all different kinds of people, generally. Not every group is helped, though, and we know that for factory workers who lost their job over the years. And I think we need to do a better job of addressing those issues.

Mr. GREEN. So is it fair to say that persons who have been traditionally among those who are unemployed at a higher rate, that they will be impacted adversely to a greater extent?

Mr. POWELL. I think that is probably right. I think the groups who are more at the margins of the labor force, at the lower end of the labor force in terms of compensation, things like that, who get hit the hardest in a downturn. So unemployment goes up the most for those people. And I think they tend to be the ones who are hardest hit by downturns, generally.

Mr. GREEN. And for the record, I would simply add that it appears that African Americans would probably be a part of that group. And I thank you for nodding.

I yield back the balance of my time.

Mr. BARR. [presiding]. The gentleman's time has expired.

The Chair now recognizes Mr. Stivers, from Ohio.

Mr. STIVERS. Thank you, Mr. Chairman. Thank you for being here, Mr. Chair. We appreciate your ability to be very accessible to all of us. I know you were in my office. You have been in a lot of our offices. I appreciate that.

This hearing today is about the state of the economy and monetary policy. And if you could just give me some true or false's here, we will give a quick summary to people.

Is it true or false, economic growth is 3.1 percent, the best in over 20 years?

Mr. POWELL. I didn't know where you have 3.1 percent, but it was 2 percent in the first quarter. It is going to be way higher than that next quarter.

Mr. STIVERS. This quarter that is projected to be 3.1 percent? Or around that?

Mr. POWELL. It is going to be higher than that.

Mr. STIVERS. OK. Higher than that.

Mr. POWELL. Projected to be higher than that.

Mr. STIVERS. All right. So good economic growth, true?

Mr. POWELL. Yes. True.

Mr. STIVERS. Low unemployment, below 4 percent?

Mr. POWELL. It is at 4 percent today, projected to go lower.

Mr. STIVERS. OK. Around 4 percent.

Wage growth is increasing?

Mr. POWELL. Has increased.

Mr. STIVERS. Has increased. And we have stable prices?

Mr. POWELL. We are close to our stable price mandate.

Mr. STIVERS. Close to our stable prices.

So as you think about the full employment mandate that you have, the Fed has historically used the unemployment rate. And over the last 10 years, what we have seen, although it is picked up a little bit lately, is a decline in the labor participation rate.

Don't you think that would be a better proxy for you to use when you compare the United States to the U.K. or Japan? Their labor participation rate is 5 to 7 points higher than ours among working-age people.

Mr. POWELL. We say in our longer run statement of principles in monetary policy strategy that we actually look at a broad range of indicators to define maximum employment. And it is many, many measures of unemployment. It also includes labor force participation.

I would strongly agree with you that is a very important area of focus for us and I believe for you as well. It is an area where the United States has fallen behind other advanced economies, and it is an area where we need to do better.

Mr. STIVERS. I think we need to transition there. There are lot of people left behind. And whether they are looking for work or not, we need to figure out how to get them moving toward the American dream. And I appreciate you being willing to look at that.

Quickly on the Volcker rule, I just want to speak for middle America. We have a lot of banks in my district, medium-size banks, little banks. They are precluded from investing in our economy. They can loan to our economy, but they can't invest in our economy. The preponderance of the wealth that is invested in private equity and other things is on the coasts.

If we were to—and I know it would require a statutory change—if we were to allow some of that investment to happen, but separately capitalize those funds at the banks so they can't just come to the Fed funds window—that is the concern, I get it, and why the Volcker rule is there—it would really help middle America.

I'm not asking to you comment on it, but I would love to work with you on that issue.

Mr. POWELL. Great. We will do that.

Mr. STIVERS. Quickly, a follow up from Mr. Himes on cyber policy. With regard to the thing that keeps you up at night the most, I think everybody you regulate inside the financial system has incentives that are aligned with behavior that works. Because the customer is limited to a $50 loss, the financial institutions have skin in the game.

The problem is many other people in the cyber system, retailers and others, offload their financial risks while they have reputational risks to others, and it has become a jurisdictional fight between our committee and Energy and Commerce. I believe we need to change that.

And I think the way to do it is to use cyber insurance the way we used workers' compensation insurance in the 1900s to improve worker safety. If we gave safe harbors for certain coverages and made sure the payouts aligned the incentives, I think you would be able to price a system, but you would have a dynamic system instead of naming standards and having them being out of date the next day. So we look forward to working with you on that.

I don't expect you to comment on that either since I am just throwing it at you right now, but I think it is a different way that maybe can break through our jurisdictional problem inside Congress. But I agree with you, it is one of the biggest threats that we have right now.

And quickly, one last thing, and this is a question that I do want you to address. Because there have been some comments on the committee about stock buybacks and how they don't do anything. But, I think it is important that we note that when a company decides to buy back stock, that money doesn't just disappear into the wallets of wealthy people; it goes to work inside the corporation. It is their way of saying this is a better way to put our money at work.

But when you look at stock ownership, many people in the middle class have 401(k)s, and that money gets a better return for them as well as every other stockholder.

So I guess the point is—and you have answered it a couple times, but just to be more clear, do you believe that stock buybacks can help the economy and the middle class, including 401(k) stockholders?

Mr. POWELL. I see stock buybacks as a way for companies to allocate funds that they don't need in their own business through the capital markets to those who do need them.

Mr. BARR. [presiding]. The gentleman's time has expired.

Mr. STIVERS. Thank you. I yield back.

Mr. BARR. [presiding]. Thank you. And just as an announcement, the chairman has requested a brief break at noon. So we will recognize the gentleman from Minnesota and then take a recess for a few minutes.

And now we recognize the gentleman from Minnesota, Mr. Ellison.

Mr. ELLISON. Thank you.

Good morning, Mr. Chairman. How are you doing?

Mr. POWELL. Great, thanks. How are you?

Mr. ELLISON. So there has been a little bit of discussion about whether or not real wages have gone up or going down. But I am just looking at what was reported by the Bureau of Labor Statistics yesterday. They said that the median weekly earnings of the Nation's 116 million full-time wage salaried workers rose 2 percent on the year, but inflation was up 2.7 percent over the same time period. That says to me that the median full-time wages have actually been falling in real terms for the past three quarters.

Would you agree with my analysis?

Mr. POWELL. Yes, as far as it goes.

Mr. ELLISON. OK. So thank you. And I appreciate that, because that allows me to ask what I really want to know, which is why in such low unemployment do we have wages either stagnant or even declining a little bit over the last three quarters? And I will just give you a minute or two to try to give me some understanding—all of us.

And it is not a setup question. It is a real question, because you would expect, with this level of low unemployment, we would see wages go up, but they are not.

So what some of your observations as to why that is happening?

Mr. POWELL. So if you look at a range of wages. Of course, there are four or five main ones, but there are many, many others, and they have differences. None of them is exactly right. And if you look at them, they have overall moved up from around 2 percent to pretty close to 3 percent now. That is good. We like to see—

Mr. ELLISON. Nominally.

Mr. POWELL. This is nominal. Yes, this is nominal. It is reported in nominal, not real.

So that is a good thing. We like to see that moving up. I have said before, and I still think you would have expected, when unemployment moves from 10 percent to 4 percent, you might have expected a little bit more in the way of increases.

On the other hand, inflation has been—employers are looking at this through the lens of how much are prices going up. And the answer has been, inflation has been low. And also, how much more output am I getting? In other words, people should earn inflation plus productivity. Both of those have been low, through no fault of any worker.

Mr. ELLISON. Now, Mr. Chairman, I hate this process because it makes me interrupt you.

Mr. POWELL. I am sorry.

Mr. ELLISON. And I appreciate what you are sharing, so I didn't want to do that, but I think it has something to do with anti-competitive practices that we see across various sectors. For example, many of us have a piece of legislation to ban something called no-poaching agreements.

Do you know what a no-poaching agreement is?

Mr. POWELL. I do, yes.

Mr. ELLISON. Could you describe in about 30 seconds for the folks listening what a no-poaching agreement is?

Mr. POWELL. So, for example, you work at a fast-food outlet. As a condition of getting that job, you have to promise not to take a job at another fast-food outlet. It is probably unenforceable, but a worker working at a fast-food outlet doesn't have the means to go to court and might not know to go to court. So it is a way of restraining competition. And there is really nothing good to be said about it.

Mr. ELLISON. Right. And to me, I think that Congress needs to be aggressive about this. Because if we are truly believing in free-market economics, the free market is being strained by these anti-competitive practices. This ought to be a bipartisan thing where we are together saying that if—you cannot, Mr. Employer or Ms. Employer, have an agreement between yourselves that you will not hire each other's employees if they go to you looking for a better wage or have a noncompete clause.

Mr. POWELL. I think just shining a light on it helps. By the way, you may have seen some of the big fast-food companies announce they won't do that anymore.

Mr. ELLISON. Well, because some Democratic attorneys general went after them, and they said, OK, we won't do it, because they know they are going to be held accountable.

But deeper than that I think is the fact that we have highly concentrated markets these days. Can you talk about market concentration in this particular economy?

It seems like every industry you look at has highly concentrated markets. Look, for example, Amazon, how they are a dominating online retailer. If you look at search engines, look at what Amazon is doing. It could even be beer or pizza or chicken or whatever it is. It seems like the other side of a monopoly is a monopsony, with limited number of buyers of labor, which makes it easier for them to simply hold wages down.

I wonder what you think about that.

Mr. POWELL. It is true that we do see measures of concentration going up, but I think that the tech companies that come out and invent a new business, they are a special case. And it is hard to know how to think about that in terms of the traditional antitrust in other ways. It is not something I feel like there are really clear answers on yet.

Mr. ELLISON. Would you consider having the research department at the Fed talk about concentrated markets and the impact on wages and the fact that they are growing very slow in an unexpected way?

Mr. POWELL. We will look into that.

Mr. ELLISON. Thank you.

Mr. BARR. [presiding]. The gentleman's time has expired.

And pursuant to the announcement just made, the committee stands in recess, subject to the call of the Chair. The Chair anticipates that we will reconvene in 10 minutes.

[Whereupon, at 11:57 a.m., the committee was recessed, subject to the call of the Chair.]

Mr. BARR. [presiding]. The committee will come to order.

The Chair now recognizes the gentleman from California, the gentleman of the Foreign Affairs Committee, Mr. Royce, for 5 minutes.

Mr. ROYCE. Thank you, Mr. Chairman.

And let me ask this, Chairman Powell. Housing financial reform remains the great undone work of the financial crisis, and you have previously called for reform stating that we need to move to a system that attracts ample amounts of private capital to stand between housing sector credit risk and the taxpayers.

A nationalized mortgage market is an unsustainable status quo, obviously, from a moral hazard perspective on this thing. And sadly, the situation we find ourselves in today was a predictable one.

In 2003, I introduced legislation, and again in 2005, which would have reigned in the GSEs, allowing them to be regulated at that time for systemic risk. Then Fed Chairman Greenspan backed the amendment, but it was not enough to overcome the outsized political pressure brought by the GSEs themselves.

To be fair, you said last summer that this was not a normal issue on which the Fed would comment, but that we were in a now or never moment for reform, as there is not a current risk with a healthy economy now in the housing system. How long with this now or never moment last? And what are the consequences of inaction on this?

Mr. POWELL. I think now continues to be a good time to move forward on this. It is one of the big pieces of unfinished business from the crisis. It is unsustainable to have effectively the U.S. housing finance system on the government's books for the long run and it's not healthy.

I don't know how much long—we are going to need to address this. I assume we will at some point, and I would just say the sooner the better.

Mr. ROYCE. Let me ask you another question on this front. Chairman Greenspan often commented on the role of the GSEs in our economy. In 2004, in testimony before the Senate, he said: Concerns about systemic risk are appropriately focused on large, highly leveraged financial institutions such as the GSEs. To fend off possible future systemic difficulties, which we assess as likely if the GSE expansion continues unabated, preventative actions are required sooner, rather than later.

Those were his words in 2004; ominous words no doubt.

Today, pressure is being brought on the Administration to release the GSEs out of conservatorship. Although I oppose this move, absent Congressional action, I am hopeful that if this were to occur, there is no doubt today that Fannie and Freddie, given their size and role in the housing market, would be regulated as systemically important.

Do you share this view?

Mr. POWELL. I—so the form in which this reform takes place will, of course, be up to you, not to us, and it is not in our lane. I would say I would really hope that these institutions would not be systemically important at some point. I would think when you figure out a process where they can be moved off the balance sheet, the idea would be that they would not present systemic risk, ideally.

Mr. ROYCE. Let me move to another question, Chairman Powell. Earlier this year, this committee passed legislation that would reverse the previous SEC rule requiring that certain money market funds float the NAV. I certainly remember when the Federal Reserve fund broke the buck in 2008—I remember where I was when that occurred—and the massive backstop the U.S. taxpayers provided to restart the entire market as a result of this and other factors.

The fact is that the value of the underlying assets of those products fluctuate. They go up and down. As I said in opposition to the bill at the time, if we learned anything from the financial crisis, it should be that the price should reflect risk. While understanding this is the primary jurisdiction of the SEC and Chairman Clayton has already expressed his concerns, I was hoping, as a member of the FSOC and as someone uniquely positioned to comment on macro financial stability, that you could comment on any concerns with this potential move.

Mr. POWELL. I very much share your concerns. This was one of the many critical weaknesses identified in our financial system during the crisis. We worked hard to address it, I think successfully, to some extent. And I would not like to see that undone.

Mr. ROYCE. Chairman Powell, I am out of time. Thank you very much.

Mr. BARR. [presiding]. The gentleman's time has expired.

The Chair now recognizes the gentleman from Illinois, Mr. Foster.

Mr. FOSTER. Thank you, Mr. Chairman.

Chair Powell, the last time that you were here, I discussed with you a policy of countervailing currency purchases as a response when a country has been determined to be a currency manipulator. I believe that my staff has transferred to your staff the ideas from the Peterson Institute on the specifics of how countervailing currency intervention may be an appropriate response. But I am actually more concerned now about the currency manipulation than I have been.

Obviously, President Trump has recklessly now begun a trade war with many of our trading partners, particularly with China. I think many of the countries that are on their currency manipulation watch list that gets reported every so often by Treasury have been either hit or threatened by tariffs. Some of these countries are going to run out of gas in terms of the products that they can impose retaliatory tariffs on, at which point I think it is quite likely that they will resume currency manipulation that they have done in the past.

And China is probably top of my list on this, because they have—they will run out of gas fairly quickly. And the damage that has been done in the past by Chinese currency manipulation is enormous and one that many of my constituents have felt in their businesses.

And so I think it is more pressing than now that we actually have a response in place, ready to go, if and when any one of those countries, in particular China, resumes currency manipulation. Countervailing currency manipulation is something that can be done. I think it is an appropriate response and it can be done.

And so I was wondering, has Treasury contacted you in any way with our suggestions that we have given to them on getting—having this take place? Because, obviously, a significant response would be a joint project between Treasury and the Federal Reserve.

Mr. POWELL. The currency issues are entirely up to Treasury. I don't know whether they have technically consulted with us about it or not. It is the first time hearing about it.

Mr. FOSTER. OK. Well, anyway, so I encourage you to look into this. If you find that there is any legislative impediments to that, I believe the suggestion from the Peterson Institute is that if this goes forward, it would be a joint effort where the currency purchases would be jointly done by Treasury and the Fed.

Mr. POWELL. We would just be implementing their decisions, though. We wouldn't be making those decisions.

Mr. FOSTER. Correct. But it is something that I hope that we are prepared for, because the risk of anything of a resumption of significant currency manipulation has certainly gone up because of the Republican tariffs. And so I just want to flag that for you.

Second, there has been some discussion in the previous testimony about wage growth and so on, and this plot that's up here. Did you see the article in The Wall Street Journal a couple of days ago about how inflation is eating up workers' wage increases? Yes. And this is essentially the plot from that showing that while workers wages were out—during the Obama era, workers wages were modestly outstripping inflation; that is no longer true in the Trump era that things like the massive tax cut for the wealthy and the deficit spending have driven inflation more than they have driven wages. As a result, for wage earners, the situation has not improved. That is in great contrast to the situation for CEOs and so on who have seen their compensation go up way faster than inflation.

And so there was an announcement by the Federal Reserve, I guess a month or so ago, that the historic milestone of household net worth exceeding $100 trillion, which I think it was a very interesting milestone in the recovery itself from, I believe, around $55- or $60 trillion during the deficit of the crisis. And so it is a real milestone, but that is an aggregate number.

And so one of the things we are seeing more and more is a divergence between average numbers when you average in the results of the very wealthy with numbers like this, which is the wages for wage earners where the situation is very different. What I would like to urge you to do is when you report, for example, household net worth, to report it not only as an aggregate but as quintiles or top 1 percent, top 10 percent, and to report this on a quarterly basis the same way you report the aggregate number. I think it would really illuminate a lot of where our economy is going. And I would like to see that in the next report and future reports, if that is possible.

Mr. POWELL. I will look into that.

Mr. FOSTER. All right. Well, thanks much.

Chairman HENSARLING. The time of the gentleman has expired.

The Chair now recognizes the gentleman from New Mexico, Mr. Pearce, Chairman of our Terrorism and Illicit Finance Subcommittee.

Mr. PEARCE. Thank you, Mr. Chairman.

Mr. Chairman, I appreciate you being here today and your leadership on the economic front for the country. So you had given testimony yesterday or whenever to the Senate about the effect of opioids and the labor force participation rate. Can you walk through that briefly for me?

Mr. POWELL. Yes. Well, labor force participation by prime age males has been declining for 60 years. It has been declining for females for maybe the last 15, 20 years in the United States. We stand out compared to other countries. So many things that happened in the economy are global. This is really something that we have.

A significant number of those in their prime working years who are not in the labor force, close to half I think in that one estimate was 44 percent, are taking painkillers of some kind, which is the opioid crisis to some extent. So there are many, many people who are out there in their prime working years, not in the labor force. We would all be better off if they were in the labor force, including them. And part of the reason they are not is the drug issue.

Mr. PEARCE. The problem is especially egregious in much of New Mexico, and so we passed a series of bills here that are directed at beginning to stem that problem. Have you looked much at the legislation that we have passed through the House, anything that stands out as being especially effective in your ideas or the ideas of the committee?

Mr. POWELL. I haven't looked at it carefully. I did see that, but I will be happy to go back and look.

Mr. PEARCE. OK, yes. Now, for New Mexico, we have a little bit of an aging population and we also have a lower income population. That all argues for less complexity in the investments. And so, typically, they would like safe investments, but then the interest rate is always at such a low rate that it is driving unsophisticated investors into sophisticated items seeking rates of return.

Any ideas how it can help out our seniors who typically fall into that category? I am thinking about my mom. The last few years of her life, she just wanted not to lose money and just to have it safe. And yet we are seeing a lot of seniors chasing rates of return and getting into very unsafe things, then they lose their nest egg. So how is the Reserve looking at that?

Mr. POWELL. We are not responsible for investor protection, but we are responsible—

Mr. PEARCE. No, it is the rate of return. It is the rate of return on simple investments. The rate of return on passbook savings or money markets, that is the question.

Mr. POWELL. Right. We have kept rates low for a long time, and we think that has had a very positive effect on the economy. It has boosted employment, it has boosted activity. I think it has definitely been tough for seniors who are really relying on their passbook savings, for example, for interest. But overall for the economy, it has been a good thing. Rates are going up now, to reflect the strength of the economy. So that should be helping some.

Mr. PEARCE. Yes. As we talk about the labor force participation rates, we are also noting a lot of skilled atrophy. People who have been on different public assistance programs for some time actually don't have much skills.

So as the President talks, he talks about the apprenticeship programs. Have you all taken a close look at how the apprenticeship programs could be directed at the people who have been out of the labor force, not the people in the high schools, but the people who have been on the sidelines for some time? Are there any studies available to us on the effectiveness of those programs?

Mr. POWELL. Yes. We have an excellent group of labor economists, and that has been a particular focus. So we would be delighted to supply that to you, discuss it with you or your staff. We would be happy to work with you on that.

Mr. PEARCE. The energy economy that you reference in your report a couple of times is one that is playing out in the southeast part of New Mexico. Some of the largest finds in most productive wells being drilled are occurring right there. The pipeline capacity is becoming a chokepoint and then also the refining capabilities. So we are suggesting building a refinery in New Mexico and asking for White House help to get the permits done. All of that would help us to become energy self-sufficient.

Thank you, Mr. Chairman. I yield back.

Chairman HENSARLING. The time of the gentleman is expired.

The Chair now recognizes the gentlelady from Ohio, Mrs. Beatty.

Mrs. BEATTY. Thank you, Mr. Chairman, and thank you, Ranking Member.

And thank you, Chairman Powell. Good to see you again. I just have a couple of quick questions I am going to try to get through. Mr. Chairman, I brought the Federal Reserve supervision and examination of the insurance savings and loan holding companies up previously with Federal Reserve Governor Quarles. And my staff brought this topic up with the Fed staff on several occasions.

Since the economic crisis, the number of insurance and saving and loan holding companies has dwindled from some 30 to just 11, according to the Fed's 2017 annual report. I have two of these insurance companies in my district which employ thousands of people. And one of them just announced that they are closing their depository institution.

While I understand that there are several business reasons for an insurance savings and loan holding company to close their own depository institution, there is little doubt that one of the factors why they are closing them down is due to the burdensome and inefficient supervisory regime by the Federal Reserve. I have worked with my colleague on the other side of the aisle, Mr. Rothfus, to introduce legislation that would force the Federal Reserve to tailor their bank centric regulations to those to insurance companies, which are wholly different from banks. While I think there should be some cost of admission for an insurance company to own a depository institution, I don't think that cost should be so high that it makes no financial sense to own one, which is where I think that we are headed.

Do you think that this problem that these insurance companies are closing their banks, that this is part of the reason, or is it the Federal Reserve's desire for no insurance companies to own a depository institution?

Mr. POWELL. It is certainly not our desire to drive anybody out of owning a bank who can legally own a bank. I think in the case of depository institutions that are owned by insurance companies, our interest is in the safety and soundness of that depository institution. So we work very carefully not to duplicate the insurance regulatory work that the State insurance supervisors capably do, but we have a role to play as the holding company supervisor as it relates to the depository institution. And that is what we care about. That is really all we care about.

I think my recollection—these companies are getting out of owning depository institutions mostly for business reasons as opposed to for regulatory reasons. In any case, we are committed to doing that as efficiently as we can and—

Mrs. BEATTY. Are you familiar with our legislation?

Mr. POWELL. Yes, I am.

Mrs. BEATTY. Is it something that will be helpful, or do you have an opinion?

Mr. POWELL. We have raised concerns. The concern that we raised is that we would be effectively out of the business of supervision at the holding company. We would promulgate standards, but they would supervised by the insurance supervisor. And the insurance supervisors, they do a fine job of supervising insurance, but they are not prudential regulators of banks. And we think if you are going to own a bank, you should be subject to regulations by a prudential regulator of banks, which would be us in this case.

Mrs. BEATTY. But you would be at least willing to see if we could tweak it or work together?

Mr. POWELL. Absolutely, absolutely.

Mrs. BEATTY. OK, thank you. On another good note, let me also say thank you for being very responsive to our letters to you from the Congressional Black Caucus and from you on diversity. I really appreciate that.

As you will probably recall, we have had several conversations about the Beatty rule that is patterned after the Rooney rule. If you are looking for minorities and, more specifically, African Americans to serve on the Federal Reserve, then you have to put them on the list. You have to include them in the room.

So while we weren't necessarily overjoyed with the last appointment, I am pleased that Mr. Bostic is there, and just hoping as more openings come, that you will keep that in the back of your mind.

Last, I have an odd question. I was on my way back to Washington, I stopped in a restaurant, and a gentleman came up to me and chased me down, and said, I know that Mr. Powell's going to be coming before your committee, would you ask him this question. We are going to paraphrase it because my team wasn't quite sure what he was asking and he stated it more as a fact. But I think what the constituent was asking me, and he stated it more as a fact than a question, but he essentially wanted me to ask you whether or not you believe the Federal Reserve's monetary policies exacerbates the wealth inequality in our country.

I think for some reason he felt that organizations who receive the interest payments on our national debt is destroying the middle class.

Mr. POWELL. No, we don't think monetary policy is exacerbating inequality. We think, in fact, it is helping those who didn't have jobs get jobs. So those are the people who need those jobs.

Mrs. BEATTY. Thank you very much. And I yield.

Chairman HENSARLING. The time of the gentlelady has expired.

The Chair now recognizes the gentleman from Florida, Mr. Ross.

Mr. ROSS. Thank you, Chairman.

Chairman Powell, thank you for being here. Your predecessor, for whom I have a great deal of respect, I know struggled for some time with regard to the impact of the quantitative easing, the low interest rates, the high unemployment. And I see that, based on your report today, the outlook is much brighter and doing much better.

I echo the concerns of my colleague, Mr. Pearce, because I have a great deal of retirees in my community and they want to start seeing some return on their investment, of course, instead of having to keep dipping into the principle of their savings.

Chairman Powell, it has been more than 9 months since the Federal Reserve had its first official Vice Chair for supervision sworn in. Prior to Vice Chair Quarles taking office, the responsibilities of his position were unofficially shared between former Fed officials to such an extent that it was never really sure who was in charge of regulatory affairs at the Federal Reserve. As a consequence, it felt to many of us in Congress that the divide between the Federal Reserve's regulatory responsibilities and those related to monetary policy wasn't as explicit as it should have been. Further, there seemed to be a high risk that Federal Reserve regulations were not being given the necessary oversight and evaluations. There were more and more regulations coming out.

And now with the position filled by Vice Chair Quarles, I would like to hear if things have changed at the Federal Reserve. Do you find that having a Vice Chair for supervision has allowed you to focus more on monetary policy the side of the Federal Reserve's work? In other words, does it help prevent inappropriate overlap of the Fed's roles now that you have distinguished supervisory roles in the Fed?

Mr. POWELL. Let me say it is great to have Vice Chair Quarles in his role. And I know he was confirmed yesterday into his underlying Governor term. He is terrific. I worked with him 25 years ago, so he has been great.

We think of the roles as pretty complimentary actually. We think that, essentially, the financial system, more broadly, and the banking system is the transmission channel for monetary policy. So we think we learned a lot about what is going on in the economy and also about how monetary policy is getting out into the economy by virtue of the fact that we are in supervision.

We do have a separate division that takes care of all that, and Vice Chair Quarles as the Vice Chair has particular authorities under the statute to recommend policies to the Board. I hope I am getting to your question.

Mr. ROSS. Yes. But as I mentioned, I think the past 10 years, as a result of financial crisis, we have seen new regulatory schemes being imposed. And it seems to me that now would be an appropriate time for the regulators to take a step back and conduct a holistic review of the impact of these regulations. And I believe that having Vice Chairman of supervision renders this holistic view more appropriate at this time.

Do you think now would be a good time for such a review?

Mr. POWELL. It is a good time. In fact, we are doing that. We are committed to sustaining the important post-crisis regulatory reforms, higher capital, higher liquidity, stress testing, resolution. We are also committed to looking at everything that we have done in the last 10 years and making sure that it is right sized and effective.

Mr. ROSS. Has your review revealed any duplicative or burdensome regulations that could probably be done away with at this point?

Mr. POWELL. Yes. I think we are finding quite a lot to do, mainly as it relates to smaller and medium-sized institutions, which I think there is quite a lot of good work that we can do on that front.

Mr. ROSS. And also part of your report you note that residential investment has leveled off for the first 5 months this year. And that is a little disappointing to me, because I think that is a leading indicator force in terms of residential investment.

When I go home to central Florida, I can see skyrocketing demand for homes, but for some reason developers just can't keep up. One of the things that you have talked about, and I think that Mr. Pearce talked about also, is the, quote, "tight supply of skilled labor."

Can you expand on that? How long have we been approaching this tight supply of skilled labor?

My concern is this, is that we have a great tailwind behind us right now. We have a 4 percent GDP. We have lower unemployment than we have had in a long time. We have more capital than we have seen before, but yet if we are not going to have the economic recovery because we don't have a labor market, what is in store for us? And how can we best address this labor market shortage that is facing us?

Mr. POWELL. It is a real challenge. Plumbers, carpenters, electricians in short supply. A lot of people left the industry after the crash. Now there is a need. And also, it is very hard to get lots. It is difficult. The zoning and everything is quite difficult.

Mr. ROSS. The training programs?

Mr. POWELL. They are also facing high materials prices.

Mr. ROSS. Which is a component of it too. But even if we—we have to have the labor is what I am getting at. And even if we have to import the labor, we need the skilled labor.

Mr. POWELL. I think you are right. There is a good question about how the economy will absorb all of this momentum, and I think the tools to expand the labor force are really not ours, they are really yours.

Mr. ROSS. I agree. Thank you. I yield back.

Chairman HENSARLING. The time of the gentleman has expired.

The Chair now recognizes the gentleman from North Carolina, Mr. Pittenger.

Mr. PITTENGER. Thank you, Mr. Chairman.

And thank you, Chairman Powell, for being with us. I really want to commend you for taking the initiative to provide time to be with members and allow those discussions to occur. I think it is very helpful for us.

Mr. Chairman, as I understand, it is your directive to promote stable prices. Some of your policy committee members have expressed interest in replacing the current inflation target with different target measures that would provide even greater variability. Given that, would you help me just better understand the difference between price stability and stable prices?

Mr. POWELL. I think they mean the same thing. I wouldn't say there is a big difference there.

Mr. PITTENGER. Good. Well, thank you. That clarification helps.

In this year's monetary policy report, you state that the labor force participation rate has been in decline for decades. And has seen a recent increase among prime age individuals. Despite the factors that continue to cause the decline persisting, you have said that the continuation of increases seen over the past few years is possible if favorable labor market conditions continue as well.

Have you seen these favorable labor markets, at least more recently, remain or even show increases since the passing of the Tax Cuts and Jobs Act?

Mr. POWELL. We do see the labor market continuing to strengthen. And as you point out, labor-first participation by prime age males and females has kicked up in the last couple of years. That is a great thing to see. We really hope those gains are sustained against a longer run trend of decline. But we hope that this is a great chance for people to get back in the labor market and we hope stay there.

Mr. PITTENGER. Would you draw any correlationship between the Tax Cut and Jobs Act bill and that dimension?

Mr. POWELL. I think that there are a variety of things contributing to this. Certainly, the business tax cuts are helping support activity, and the individual tax cuts too.

Mr. PITTENGER. How has the Tax Cuts and Jobs Act affected your current monetary policy?

Mr. POWELL. It is hard to single out an effect. We really look at many, many different things. The economy's strong and we are on a path of gradually raising rates, and I think that reflects all of the things that are going on, including the changes in fiscal policy.

Mr. PITTENGER. Yes, sir. With the new tariffs coming from both at home and abroad, some businesses are shying away from both capital and labor force investments. The report States that exports had increased in the second quarter, led by agricultural exports. Do you see this changing, especially in light of the retaliatory tariffs on numerous agricultural products from Canada and the European Union?

Mr. POWELL. I think there is a lot of uncertainty about how this round of discussions between us and essentially all of our major trading partners will come out. I think if it does wind up in a lot of reciprocal tariffs, then it would certainly affect our exporting industries, including in a big way, U.S. agriculture. So it is a risk.

Mr. PITTENGER. Yes, sir. You previously stated that the U.S. financial system is substantially more resilient than the decade before the financial crisis. Should there be a trade war, what tools do you have, to move quickly to ensure this continued resiliency in economic growth?

Mr. POWELL. I think the financial system is well capitalized and so much more strong and resilient in so many ways that it is there in a position so that it can resist or be resilient against shocks of various kinds, and that would include changes to trade policy that became disrupted. Our monetary policy tool we can always use to— it really relates to demand. So if demand weakens, then we can support demand.

The harder issue is you could be seeing higher prices because of tariffs at the same time you are seeing lower economic activity. And potentially, that would imply higher inflation. A mirror increase in tariffs wouldn't mean necessarily higher future inflation, but if it did have that implication, it could be very challenging for policy.

Mr. PITTENGER. Thank you. My time has expired.

Chairman HENSARLING. The time of the gentleman has expired.

The Chair now recognizes the gentleman from Pennsylvania, Mr. Rothfus.

Mr. ROTHFUS. Thank you, Mr. Chairman, and welcome, Chairman.

I want to talk a little bit about the automatic SIFI designation being set at $250 billion in S. 2155. This was an important change that right sized the regulatory burden for a significant number of small and medium-sized institutions.

In setting the threshold at $250 billion, however, we grouped large regional banks together with banks that have assets in excess of $1 trillion. These institutions do not only differ from each other in terms of size, they also differ in their levels of risk and complexity, as well as their capital structure and their business mix.

Would you agree with that assessment that there is a distinction between those large regional banks and those other banks?

Mr. POWELL. Very much so. Not just size, activities as well.

Mr. ROTHFUS. Given this distinction, how will the Fed be tailoring regulations for banks above the $250 billion threshold?

Mr. POWELL. Working on a framework now. Some ways away from publishing it, but it will take into account a range of factors, including size will be one, but also many others, such as complexity, interconnectedness, the nature of their activities, all those. We will take in a wide range of factors. The bill gives us a great deal of flexibility to identify the appropriate factors, and we are just in the process of doing that. We are going to put that out for comment and listen carefully to public reaction too.

Mr. ROTHFUS. Any timeframe yet on when that might happen, comment period?

Mr. POWELL. I can't be precise. I will just tell you we are working hard on it right now.

Mr. ROTHFUS. When Secretary Mnuchin testified before this committee, I asked him about an issue that many of us on this committee have expressed concerns about: Nonbank SIFI designations. I have advocated for an activities-based approach to addressing systemic risk. I was pleased to hear that Secretary Mnuchin also supported adopting this approach and that the FSOC was moving in that direction. Do you support an activities-based approach?

Mr. POWELL. Yes. I think that makes sense.

Mr. ROTHFUS. What would be the status of FSOC's implementation of that approach?

Mr. POWELL. Really a question for the Secretary, but I think that is more how we are looking at things these days, is looking at activities, as well as we can always look at institutions when it is appropriate. But for now, we are looking at a lot of activities.

Mr. ROTHFUS. If I could talk a little bit about the yield curve. The inversion of the yield curve is typically viewed as a sign of a coming recession. The yield curve is currently flattening and this has attracted a lot of attention.

In a recent post, Minneapolis Fed president Neel Kashkari wrote, quote: "This suggests that there is little reason to raise rates much further. Invert the yield curve and put the brakes on the economy and risk that it does, in fact, trigger a recession."

Do you agree with this view?

Mr. POWELL. I don't see any evidence that a recession is imminent. We are not forecasting a recession. And so I don't really think we see a recession coming.

Mr. ROTHFUS. Do you have an opinion on how strong of a signal the yield curve inversion is?

Mr. POWELL. So the inversion of the yield curve has been—just as an empirical matter it has been associated with downturns in the past. But I would just say the real point is the yield curve inverts—we know why short-term rates go up, because basically they are looking at the Fed's expected rate path. The real question is what is going on with longer term rates. And if you back out the term premium and look at that, then it is really an assessment in the market of what the neutral longer term rate is, what it will be. So if, in fact, monetary policy is higher than that, then that means that policy is tight. You are actually tightening policy.

So the yield curve is simply a way to identify what is really the important thing, which is where is current policy and where is expected policy relative to neutral. So I prefer to look directly at the question at hand. And you think about the yield curve as giving you evidence on that, so the yield curve is not inverted now. It is still at a positive slope and it is something that we will watch. All of us have a little bit different ways of thinking about it. That is how I think about it. Something we are looking at carefully.

Mr. ROTHFUS. Thank you. When you last testified before this committee, we discussed the importance of monetary policy independence and potential risks to that independence posed by both our national debt and the Feds outsized balance sheet. Would swapping mortgaged-backed securities holdings for treasuries help to mitigate some of the political risks that follow for monetary policies becoming credit policies?

Mr. POWELL. I don't see our MBS holdings as—they are dwindling over time now. They are in normalization mode. I don't see them as presenting a particularly salient independence risk to us right now.

Mr. ROTHFUS. Thank you, Chairman. I yield back.

Chairman HENSARLING. The gentleman yields back.

The Chair now recognizes the gentleman from Maine, Mr. Poliquin.

Mr. POLIQUIN. Thank you, Mr. Chairman, very much.

Thank you, Chair Powell, for being here. You have been here, sir, for almost 3 hours with a 10-minute break, and you look like you need a vacation. I want to remind you that Maine, that I represent, is vacation land. You don't even need air conditioning up there. And I am sure you and your family would enjoy it. If you want to go up there, just give us a call, we will send you in the right direction.

Sir, the past couple of years, the economy has been getting stronger and stronger, and you mention in your testimony that the national unemployment rate has been about the lowest it has been in 20 years. Up in Maine, we have also good news. The unemployment rate is roughly 2.8 percent. It has been the lowest in about 50 years, and folks are making more money and they are able to change jobs if they don't like the one they have. And some of our young workers are able to come back to the State, where in the past, they haven't been able to. And our confidence with our consumers and our small businesses is all very strong.

Now, if you look at the prior 7 to 8 years, the exact opposite was going on. Unemployment rates were very high. Confidence was low. Taxes and regulations were high, and we had a real problem everywhere.

Now, my point to you, sir, if you would agree with me, that this strong economy we have now is not by accident. It didn't fall out of sky. There is something that had to be done to correct this. Would you agree with me that making it easier for businesses to grow and hire more people and pay them more through lower taxes and fewer regulations, more predictable regulatory environment, has helped the economy?

Mr. POWELL. Yes. I guess I would just say in principle that regulation should be balanced.

Mr. POLIQUIN. Sure.

Mr. POWELL. And it should be fair and that will support—

Mr. POLIQUIN. Anybody that is running a business—and I come from that part of the world, sir—would agree with that. And I appreciate—I know you don't want to dig into policy that we do here and I understand that.

One of my concerns, my major concern, Mr. Powell, is how do we keep this going? How do we keep this going for our families in Maine and elsewhere?

I look back at the last few recessions. In 2001, we had a bubble in the dot.com sector of the tech stocks and that caused a recession. The terrorist attacks of 9/11 caused a mild recession after that. That is an external event that we can't control here anyway. And then in the 2008 to 2012 Great Recession, again, a real estate bubble in part brought on by financial instruments that dealt with the real estate market brought that on.

So I think we can both conclude that what happens in the capital markets, what happens in the financial sector has a huge impact on what happens on Main Street when it comes to a growing economy or the other way around.

Now, here is my concern, Mr. Powell, and I would love to have your response to this. During the past 10 years—for most of the past 10 years, interest rates have been very low, in some cases at zero, unusually low. And that has caused a rising financial sector, whether it be the equity market or the fixed income market. So I am looking and I am saying, here we have the Chair of the Fed before the committee of jurisdiction in the House. What advice can you give to Congress, Mr. Powell, to make sure that we keep this strong economy going? What should we make sure we do not do?

Mr. POWELL. Well, let me say we strongly share a goal to keep this expansion going, and we think that continuing to gradually raise rates for now is the right way to do that. As I think we discussed when we were together, I think it is important to address things like we talked about earlier, things like labor force participation, things like education and training. We need people. We need more people who can fill these jobs that are going to be coming open.

My concerns are really about the supply side at this point. We are close to full employment, maybe not quite there. But it is the issues like labor force participation and job training and addressing the people who are out of the labor force, get them back in.

Mr. POLIQUIN. There are some folks that think we ought to raise taxes and go back to where we were before. Is that a good idea?

Mr. POWELL. I am not going to give you advice on fiscal policy. Sorry.

Mr. POLIQUIN. OK. The national debt—I am pivoting a little bit, Mr. Powell—is about $21 trillion. It is horrible. The interest on that debt now is approaching roughly $300 billion per year, which is about 1–1/2 times what we spend to care for our 7 million veterans every year in this country. At what point do you think the debt service payments, the interest on that debt becomes a problem for our economy?

Mr. POWELL. It is hard to identify a particular point. I would just say we have been on an unsustainable fiscal path for some time and the theory is we should be addressing it when the economy is strong.

Mr. POLIQUIN. Do you agree with me that a balanced budget amendment for the Constitution is a good idea to force Washington to spend within its means and start paying down our debt, sir?

Mr. POWELL. No, I do not.

Mr. POLIQUIN. Thank you, Mr. Chairman. I yield back my time.

Chairman HENSARLING. The time of the gentleman has expired.

The Chair now recognizes the gentleman from Minnesota, Mr. Emmer.

Mr. EMMER. Thank you, sir. Mr. Chairman, it is again a pleasure to have you here and have an opportunity to hear you and speak with you.

For starters, I would just like to make a brief comment about tailoring regulations. You mentioned the importance of taking a tailored approach to financial regulation when you appeared before our committee in February, but that was actually prior to the passage of the Economic Growth, Regulatory Relief, and Consumer Protection Act.

Eliminating the one-size-fits-all regulatory mindset for small community financial institutions is obviously important. However, S. 2155 was explicit in its requirement that Federal regulators shall tailor enhanced prudential standards for all financial institutions based on their risk instead of asset size. This is a very important issue, and I hope that we can keep an open and constructive dialog on this issue in the weeks and months ahead.

Again, for us it is the issue of risk versus asset size. And I see you are nodding, so hopefully that means we are going to keep a constructive dialog.

Mr. POWELL. Look forward to that.

Mr. EMMER. Moving on, Chairman Powell, your committee initiated a balance sheet roll-off less than a year ago, October 2017. During your—shortly thereafter, during your confirmation hearing, you testified the balance sheet reductions would likely stay in place for, quote, "about 3 or 4 years."

I understand, however, that now, some FOMC members are already calling for an early end to what has been a seemingly slow balance sheet normalization schedule. Are you considering a premature end to your balance sheet roll-off program?

Mr. POWELL. No, but let's be clear. We have always said that there is significant uncertainty about how long it will take. Ultimately, the balance sheet will be no larger than it needs to be for us to conduct monetary policy and will consist primarily of Treasury securities. And its ultimate size in the long run will be driven by the market's demand and the people, public's demand for our liabilities, principally currency and reserves.

So we are learning, along with everybody else, as the balance sheet shrinks, as to what the new normal will be. And I have to say there is a significant amount of uncertainty. We will learn a lot. The markets are moving their estimates up, but I don't think we are going to know for some time exactly what that equilibrium size will be. It will be much bigger, though, than it was before the crisis, because the public wants—currency and circulation more than doubled since 2008, well more than doubled, and reserves have gone up substantially because they are a highly desirable liquid asset for banks.

Mr. EMMER. All right. But at this point, there is no plan to prematurely end the roll-off?

Mr. POWELL. Certainly not prematurely, no.

Mr. EMMER. All right. The European Central Bank is reportedly convinced that the region's economy is strong enough to withdraw some of its crisis-era support. Our economy, by contrast, has been humming for more than a year. If the EU is lifting off from its unconventional stance, should we be slowing or stopping return to fundamentals? And would doing so leave us stuck with a balance sheet that remains conflicted between monetary and macro prudential policy?

Mr. POWELL. We are much more significantly down the road in the normalization process. The European Central Bank has said that they would stop asset purchases, assuming certain conditions are met by the end of year, and would not begin to raise interest rates until at least the end of the summer of 2019. So they are some years behind our process. We have been raising interest rates since December 2015. Our balance sheet has been shrinking, as you pointed out, since last October.

And I think our path is working very well. We think the gradual rate increases are right, just about right. And we think the balance sheet normalization process is working very smoothly.

Mr. EMMER. Has your committee devised a strategy for how and when to change the balance sheet roll-off schedule? I am taking you down this road because I understand your answer earlier is there is a lot of uncertainty and we learn as we go. But what is the strategy here or is it just that general, that we are going to see how this goes and we are going to leave ourselves the flexibility to jump in and change things?

Mr. POWELL. We said we would continue the program as announced, unless there were—and we will get the exact terms, but it is really a significant economic downturn requiring a meaningful reduction in interest rates, words close to but not exactly that.

Mr. EMMER. I don't know if you will have time, but I do want to ask this. Do you think, Mr. Chairman, that market participants have the transparency they need to make productive investments in our economy? And what data would persuade your committee to speed up, slow down, or even stop?

Mr. POWELL. A significant downturn in the economy required meaningful reduction in the interest rates. I think the markets understand it very well.

Chairman HENSARLING. The time of the gentleman has expired.

The Chair now recognizes the gentleman from Washington, Mr. Heck.

Mr. HECK. Thank you, Mr. Chairman. And thank you, sir, for being here.

So for over a year now, I have been helping to lead a task force trying to understand why home prices and rents, frankly, are soaring all over the country. And it turns out the answer is pretty simple: We are not building enough housing units, period. I looked this morning, and as it turns out, new home starts are lower than when you started at Treasury under the first President Bush. And a lot of time has passed and the population has grown considerably. Fewer home starts than way back then.

So prices are rising because of the simple fact that we are missing millions of homes and we have too many people bidding for too few homes. And we are trying to understand why construction isn't happening and what can be done about it. We feel pretty strongly about this because homeownership is still an integral part of the American Dream and, frankly, it is the number one source of retirement security for most Americans. But it also strikes me that it is pretty important to your work, sir.

Now, in my mind, I have a simple model. When the economy goes bad, you all cut rates, and that means that more people buy more automobiles and more homes, and the workers in those industries work longer hours and get more wages, and it creates a virtuous cycle of economic growth. But what happens if home construction doesn't or can't respond?

The weakness in housing in this last recovery was clearly a reason why it was at historic, some would say anemic levels. And if home construction continues to be broken, and there is every bit of evidence that it is, I am wondering what that means for the next recession and what your response can and should be. Does it mean you have to cut interest rates even more aggressively to get the economic response? Because it didn't seem to work out very well that way this time.

Mr. POWELL. So you are right, those back in the day, it was nothing to see—well, it was common to see 2 million housing starts in a year and more. And we don't see that now. And part of that is just the population's growing a lot less, like a lot more slowly now, much, much slower than it was, so there is less demand.

And I am sure you talked to a lot of home builders and their representatives in your work, and what they say now is it is really supply side constraints. They can't find electricians, plumbers, carpenters. Also, it is hard to get zoning, it is hard to get lots. Very difficult to do that. They are yelling loudly about materials prices, lumber in particular. And so that is what they are doing is they are building fewer homes and the prices are going up more quickly. We don't really have the tools to deal with that.

In terms of the importance of housing, though, the economy is so much bigger than it was before and housing is smaller than it was before. So it is a less important driver of economic activity at the aggregate level. It is still tremendously important for individuals. It is still part of the American Dream and part of what young families and folks want to have.

But I don't think it has—it doesn't have—it is not the single most important factor driving monetary policy right now. I think these issues are really issues out in the labor market that we don't directly affect.

Mr. HECK. So would you agree, however, that historically, housing construction has played a much more important role in economic recovery?

Mr. POWELL. It was a far bigger part of the economy and it was also—can be very cyclical. So yes. You go back to the seventies and eighties, it was, first in first out, first in the recession, first out.

Mr. HECK. And before, during recoveries—and if you do the math on what the increase in GDP growth would be, if we simply had a housing market that was in balance, then it wouldn't be too hard to calculate a material increase in GDP growth. Would you agree with that?

Mr. POWELL. It would be bigger. If housing starts were 50 percent higher or something, yes, that would be meaningful, for sure.

Mr. HECK. So some of what you said, not only do I agree with, but our study concludes as well, which is that these other inputs, land, labor, lending, lumber, or materials, are the key drivers here. But the takeaway I have from you today is that those inputs and whatever limitations and challenges that they are presenting is holding back housing construction may, in fact, be immune to interest rate reduction and so we better get to work on those factors.

Mr. POWELL. Well said.

Mr. HECK. Thank you, sir.

Chairman HENSARLING. Time of the gentleman has expired.

The Chair now recognizes the gentleman from Illinois, Mr. Hultgren.

Mr. HULTGREN. Thank you, Chairman Hensarling.

Chair Powell, welcome. Glad you are here. I would echo much of what my colleagues have said on both sides of the aisle of our gratitude for your openness and willingness to meet with us and hear from us, and that is so affirming. So thank you very much and I appreciate your work.

I have shared some very specific concerns with you about how our current risk-based and leverage-based capital rules are damaging to liquidity and the listed options markets. Title 7 of Dodd-Frank requires central clearing for derivatives in case of options. This service is generally provided by bank clearing members. The Financial Services Committee reported a bill, with unanimous support, which recently passed the House directing bank regulators to adjust the capital rules. However, as I understand it, no change in law is necessary for the Fed to provide targeted capital relief.

I wonder if you have thought any further about how the Fed can address this issue in an expeditious manner. And do you believe SA-CCR can be implemented within the next 8 to 12 months? I understand that there is not even a proposal out for comment yet, but we have an issue in the options markets right now.

Mr. POWELL. We think SA-CCR is a good policy, and we are working on a rule on it now. And I hope it can get out before 8 or 12 months. I will go back to the office and check in. But it is a priority. I know there is actual drafting going on and negotiation between agencies, so it will happen.

Mr. HULTGREN. That is perfect. That is what we want to hear. I think you can see from even just the action yesterday and in the last couple weeks of very strong bipartisan support to make sure that these markets work well.

I sent a letter to financial regulators with responsibility for the Volcker rule back just a couple weeks ago, July 6, requesting that they reconsider the definition of covered funds. That definition currently excludes venture capital. As my letter states, the Congressional Record clearly demonstrates, through a colloquy between Senator Boxer and then Chairman Franks, that investing in venture capital was never intended to be prohibited by the Volcker rule when section 619 was drafted by Congress. This prohibition restricts access to capital for startup companies.

I wonder, do you believe the Volcker rule should be amended in a way that ends this prohibition on investment and venture capital? And have you discussed this issue with your peers at the other financial regulators? Any thoughts on odds that there could be change made here?

Mr. POWELL. I am not directly handling those discussions now, but, we put a draft out for comment, and we are hearing on this point a lot, I believe. Although, I guess the comment period, the comments haven't really come in yet. The comment period hasn't started running yet because we haven't published the notice.

But our idea is that these activities are not ones generally that threaten safety and soundness. So consistent with the letter and intent of the law, we want to allow what flexibility there is and we look forward to getting input on how we can do that.

Mr. HULTGREN. Great. Thanks. I recently sent your office a letter that I hope will draw your attention to the growing issue of wire fraud. This is something that we have heard testimony on in the Financial Services Committee last year.

In general, since reviewing my letter, I wonder if you have any ideas for how to prevent wire fraud. And have you considered any recommendations, maybe some that I have made, of having financial institutions apply a payee matching system when initiating a wire transfer?

Mr. POWELL. So we appreciate your letter. I was looking at it again this morning, as a matter of fact, and we are putting together a nice response. Some of the data in your letter is quite alarming. So I appreciate your bringing that to our attention.

Mr. HULTGREN. Great.

Mr. POWELL. So we will come back to you with something in detail.

Mr. HULTGREN. That is great. Thank you so much.

If there is anything else you need from us or that we can be helpful with, again, I think it is something that is so important for that confidence, especially in home purchases and things that are being abused right now.

Last question, last minute here, and a lot of my colleagues on both sides have talked about this, but over the last 18 months, by almost every measure, we have had a very strong economy and taken appropriate actions to allow this momentum to continue. We have seen a boost in consumer and business confidence following the recent tax cuts and continued regulatory relief efforts.

That said, there are certainly issues that Congress must continue to address, like better training of our labor forces to meet labor demands of our expanding modern economy. I wonder, do you have concerns that protectionist trade measures may generate headwinds that counteract the recent stimulus provided by Congress and the Administration? And do you believe a trade deficit is somehow a measure of whether the U.S. is winning or losing in the global economy? In other words, do you believe trade is a zero sum game?

Mr. POWELL. We have these discussions going on with basically all of our major trading partners, NAFTA, the EU, China. And we are not responsible for those. We are not even a participant. We are not consulted in any way. But it would be good if they resulted in lower tariffs broadly. If they resulted in higher tariffs, higher trade barriers, then that will be a bad thing for our economy, for our workers, and for incomes.

Mr. HULTGREN. Thanks, Chair. I yield back.

Chairman HENSARLING. The gentleman yields back.

The Chair wishes to inform all members that I will be excusing the witness at 1:30. I anticipate clearing four more members. Currently in the queue are Mr. Gottheimer, Mr. Loudermilk, Mr. Davidson, and Mr. Budd.

The Chair recognizes the gentleman from New Jersey, Mr. Gottheimer.

Mr. GOTTHEIMER. Thank you, Mr. Chairman.

Chairman Powell, thank you for being here today.

Our economy is entering a phase of increasing technological disruption, including automation through artificial intelligence. These factors are expected to eventually increase our productivity, but also to significantly affect our workplace.

McKinsey recently issued a report on automation and jobs that projects 16 million to 54 million Americans will have to find new occupations by 2030, depending on how quickly technology is adopted.

If you take the taxi industry as an example, the use of ride-sharing apps has devalued assets like taxi medallions and transformed that industry. And it has pushed some drivers out and brought new entrants in. And as tech companies strive for more automation and leverage artificial intelligence, more drivers will likely be pushed out or transitioned.

AI and automation will have the same effect on other spaces, like trucking and trading and a host of other industries. And I believe in tech, and I obviously don't believe we should become Luddites. We need to look toward the future and constantly innovate. It is a big competitive advantage for our country, and obviously our foreign competitors are doing the same.

I believe our government needs fiscal and monetary policy to ease the transition, or at least be aware of it and understand what we need to do in this process. And the Fed's monetary policy is obviously a blunt tool, but given your dual mandate, are you monitoring automation's impact on productivity and our labor? And what tools are you considering in this transition, sir?

Mr. POWELL. We look very carefully at those issues. We have great researchers at the Fed. We don't have a lot of tools to deal with it, but they do present really challenging issues for us in the future and now.

Mr. GOTTHEIMER. Are there things that you believe that Congress should be considering to help minimize the effects of these transitions or make sure we are prepared as a workforce?

Mr. POWELL. I think when I graduated from college, I think there was this sense that people would find a career and find an employer, and many of them would spend 30 years with that employer. I think that is not the world we are in so much anymore, not that some people won't do that.

So I really think the idea that education ends when you get out of college or grad school, we need to be thinking a lot about midcareer training and education so people can go on and have another leg to their careers rather than being let out to pasture at age 40.

So I think that is a key thing we need to be doing, and Congress can certainly play a role there.

Mr. GOTTHEIMER. Thank you, sir.

And just to switch topics slightly, and I appreciate your response there, on the housing front, I wanted to speak to you about the market a bit, specifically, the change we have seen in the Federal Housing Administration's (FHA) insured loans, but also the market as a whole.

The mortgage market is now dominated by nonbank lenders. They are upwards of 75 percent of FHA loans. Prior to the housing crisis, in that frothy era, this number was flipped on its head. Banks made up more than 75 percent, if not more, of the housing market.

What risks do you think this presents as the credit cycle turns? That is my first question, if you don't mind.

Mr. POWELL. So in housing now, we do see that most of the borrowers now have much higher credit scores, so it is a very different market. The question is, was that line drawn at the right place?

But it is clear that most of the people who have access to mortgage credit now are people with fairly high credit scores, so it is quite different. And that is where the household borrowing is, again, from people who are well off.

Mr. GOTTHEIMER. So you think if there is a downturn, we are better prepared for it?

Mr. POWELL. We are better prepared for it, yes.

Mr. GOTTHEIMER. Are there things that you think, as you look at this, that Congress should be doing to get banks back into the mortgage market more to ensure lending during economic downturns looking forward there?

Mr. POWELL. Well, I think a good question for Congress is—and it is not one for us, but for you—is coming out of the crisis the one place where we really changed credit availability was in mortgages, and that had to be done because we know that mortgage credit was—people were making loans that they may not have understood, but that really shouldn't have been made, lots and lots of those.

So, the question is, was that made at the right level? Are there still, at the margin—and there has been some work done on this—there are probably significant numbers of creditworthy borrowers who are not getting access to mortgage credit. And I would think part of it is that the banks know that they made these terrible mistakes and paid great prices for it, and so do the households.

Still, I think it is worth looking at that. It is not too soon to be looking at that.

Mr. GOTTHEIMER. I think you are right.

Thank you, Mr. Chairman. I appreciate your time.

Mr. POWELL. Thank you.

Chairman HENSARLING. The gentleman yields back.

The Chair recognizes now the gentleman from Georgia, Mr. Loudermilk.

Mr. LOUDERMILK. Thank you, Mr. Chairman.

Chairman Powell, thank you for spending the time with us today.

I actually want to circle back to something that Chairman Luetkemeyer raised earlier today. And since that was probably a couple hours ago, refresh.

He was talking about the banks that fall between the $150 and $250 billion in assets, and how after the 18-month period, they are relieved from SIFI regulation. After that the law allows the Fed the ability to restore the regulations if the bank chose to be a systemic risk.

Regarding current conditions, recent CCAR (Comprehensive Capital Analysis and Review) results and GSIB surcharge risk data show, that banks with less than $250 billion do not present a systemic risk at this time. And I, as well as many others, believe that there should be exemption from the SIFI regulation for those.

So I want to follow up, that when you testified back in February, I had asked similar questions. And you had said that banks under $250 billion are more engaged in traditional banking and less complex and generally do not pose a systemic risk to the economy.

So my first question is, am I correct in assuming that since the CCAR results further confirm your view, that these firms don't pose a systemic risk at this time?

Mr. POWELL. It is interesting, as a general matter, yes, actually one of the eight SIFIs has less than $250 billion in assets and is still a SIFI. One of them does because of the nature of its activity.

So we look at a range of things. I would stand by what I said, though. Under 250, these are institutions which generally are simpler, they are less complex, and they are engaged in traditional banking activities. So they are different from the very large ones that deserve and get the higher scrutiny.

Mr. LOUDERMILK. OK. Well, I appreciate that.

And at yesterday's hearing you discussed a thorough rulemaking process, that you are going to make sure that these firms are strictly reviewed before receiving regulatory relief.

On that topic, some bankers who I have spoken with are concerned that your staff wants to tailor the regulations or partially apply them to firms that are not systemically risky.

If this is true—which would be somewhat troubling—I think data and evidence should determine the outcome. Can you confirm that firms that don't pose a systemic risk will be exempt from the SIFI regulations?

Mr. POWELL. We are going to do exactly what the bill orders us to do, which is publish a framework for how we are going to think about risk to financial stability and safety and soundness. This is the language of the bill. We are going to put that out as soon as we can possibly get it thought through. We are going to get comment on it. And then we are going to go forward from there.

And we very much take to heart the letter and spirit of the bill, and we will look forward to getting input when we finally propose something, I hope soon.

Mr. LOUDERMILK. So am I right to interpret that we are going to let the data determine the outcome?

Mr. POWELL. Yes, we are in the process now of identifying the factors that we will think about. The bill gives us a lot of flexibility, identifies some factors, and gives us other flexibility.

We are going to publish a framework that says how we are going to look at activities and institutions below 250, and then we are going to hear back from the world about how we did and how we should think about these things.

And it is a process that the statute orders us to undertake, and that is what we are doing.

Mr. LOUDERMILK. So is it conceivable that—or maybe it isn't—is it, I guess, possible that you have a regional bank, let's say $150 billion or so, that may have partial regulation of SIFI? Or is it going to be either they are systemically risky or not?

Mr. POWELL. I really haven't faced that question yet. We have always tailored, even when the limit was 50, we always tailored the application of the so-called enhanced prudential standards under 165. We tailored those a lot in the prior world. So we will obviously do that, too. And we will certainly continue to do that.

Mr. LOUDERMILK. OK. And probably don't have time to get into my last question, so I will submit it to the record. And I will yield back the rest of my time to maybe allow somebody else to get in before the hard time.

I yield back, Mr. Chairman.

Chairman HENSARLING. The gentleman yields back.

The Chair now recognizes the gentleman from Ohio, Mr. Davidson.

Mr. DAVIDSON. Thank you, Chairman.

Chairman, thanks for your testimony. Thanks for the work you are doing there. And I look forward to the Senate giving you some more colleagues soon hopefully.

You have spoken a fair bit about trade. A lot of our colleagues are concerned about trade and the impact that bad trade practices have had on our economy. Frankly, some concern about the tactics that have been employed to engage in that.

I wanted to see if I have your quote right. “Trade is really the business of Congress, and Congress has delegated some of that to the Executive Branch.”

Do you think it would be a positive development from the economy’s perspective to have collaboration across the entire cross section of the economy that Congress represents?

Mr. POWELL. I think this is really—Congress—the Constitution gives this to you, authority, and you have over time delegated some of it to the Executive Branch. But it is your authority.

Mr. DAVIDSON. Thank you. And we are working to reclaim it with the Global Trade Accountability Act, H.R. 5281. We are always looking for cosponsors. And this leaves the authority in the President’s hands to negotiate, but similar to the REINS Act, gives authority to Congress to review. And I think it would promote a more collaborative process than Peter Navarro has recommended and, in fact, persuaded folks to implement.

Do you think that if we had practices that were more targeted in the effect that we could be able to focus on bad things then? Let’s just phrase it the other way. Do you think uniform action across all countries in all sectors is potentially more disruptive to the economy than targeted actions?

Mr. POWELL. Mr. Davidson, we don’t have this authority. This is authority that—

Mr. DAVIDSON. Correct. I am just asking about the impact on the economy, macroeconomically.

Mr. POWELL. I think on issues like fiscal policy, trade policy, immigration policy that can affect the economy, I think we have a role there because we are responsible for the economy, but I think we need to stay at a higher level of principle. And what I am comfortable saying is that a more protectionist approach to trade, if it is sustained over a period of time, has not historically been good for economies. It has meant lower incomes, less opportunity for workers.

Mr. DAVIDSON. On the economic principle of trade, it is the called trade because it is reciprocal in the sense both parties benefit in trade. Do you see trade as a zero-sum game?

Mr. POWELL. No. I do think that trade needs to be fair as well as free, and I think it is very appropriate to have an internationally agreed set of rules, and when anybody breaks those rules, they have to face the other countries in that setting and change their policies. I think that is a healthy way to go. I don’t think a bilateral trade deficit is a good measure of trade between countries, though.

Mr. DAVIDSON. Thank you very much.

One of the things we have also dwelled on is workforce participation. And one of the big barriers to the growth rate in the economy is workforce participation.

Without alluding to specific policy—and I don’t want to put you in that spot—we have tried to make some reforms on bills.

Most notably, recently, the farm bill, which is really only about 20 percent about farming, a very incremental change to expect that working-age adults, 18 to 59, able-bodied, no dependent kids at home, not in an economically depressed area, a couple other qualifiers, that in order to continue to receive support through food stamps, that they would work.

Would this, in your mind, policy tools that motivate people to participate be effective at workforce participation?

Mr. POWELL. I can't really take a position on that. I will say that there is not a lot you could do that would be more constructive than to find ways to support labor force participation that will work on a bipartisan basis and can be enacted. It is tremendously important.

Mr. DAVIDSON. Thank you for that. Thank you.

And so cryptocurrency is a big thing. And so without talking about specific things in our policy, we are working with Basel on a number of fronts. And some concern, we always protect our sovereignty in that. Where do you see Basel going with respect to cryptocurrency?

Because essentially, the concern there is that even if the U.S. creates a better regulatory framework than we have today, there is still arbitrage in markets.

So there is a desire to have some regulatory framework. Is Basel addressing that, particularly with respect to cryptocurrency?

Mr. POWELL. I think anybody who owns—if a bank owns cryptocurrency, then it will be subject to capital. It will have to hold capital against that. I guess a good question is, should it be more than the normal level of capital, because it is a risky asset?

Mr. DAVIDSON. Right. So to the extent that it is an asset, it would be treated, if it is a commodity, treated as if it is a commodity. If it is truly a currency, it would be treated as a currency based on its amount of volatility as a currency. For example, the pound sterling is probably a different reserve currency than the Thai baht.

Mr. POWELL. Yes. And I don't know that we—so it is not mainly a bank capital issue. Of course, I think the regulatory issues facing cryptocurrencies are big and broad and go way beyond banking.

Mr. DAVIDSON. Thank you. My time has expired.

Chairman HENSARLING. The time of the gentleman has expired. The Chair will recognize one more member and then we will dismiss the witness and adjourn.

The Chair recognizes the gentleman from North Carolina, Mr. Budd.

Mr. BUDD. Thank you, Chairman Hensarling.

Chairman Powell, again, welcome back. It is always good to be with you. I appreciate you being here today.

So I want to start off with Volcker. I think a lot of us can at least appreciate the intent behind Volcker, which is to reduce risky activities in banks, in particular high risk prop trading, and that potentially makes sense.

However, it seems to be odd results that under the current rule activities such as providing capital and loans to growth and startup companies, activities that we should be encouraging banks to engage in, are materially limited as a result of that rule.

Your recent NPR is open-ended on covered funds and does not provide a lot of guidance about where the Fed may intend to go. Yet, these funds can be critical sources of capital for companies looking to grow their businesses. And the prohibition on funds is fairly broad and even includes restrictions on venture capital funds.

So, Chairman Powell, is there a way for the Fed to simplify the covered funds regime to help smaller companies obtain greater access to capital?

Mr. POWELL. And we are looking for ways to simplify Volcker in ways that are faithful to the language and intent of the statute, and that is one particular provision. And we look forward to getting constructive comments on how we may do that better.

Mr. BUDD. So you are just waiting through the NPR period, then, on that?

Mr. POWELL. Yes, we are really looking for input here on—this is a notice of proposed rulemaking. We want a lot of input. Our job is to implement Congress' wish, and that is the Volcker rule, but we want to use such flexibility as we have that doesn't undermine safety and soundness. And there would clearly be some flexibility around the issue you are talking about.

Mr. BUDD. Thank you. I want to switch topics to the ongoing negotiation of new international capital standards, or ICS.

First, I want to thank you for such a quick and thorough response to questions I had after we met last time. We don't always get quick responses, but you did, so thank you. We are genuinely grateful.

And the following question, sir, it was originally intended for Vice Chairman Quarles, but a letter he sent back to my office on this question we received just yesterday and chose not to respond at this portion. So hopefully, I will pitch it to you for an answer.

Governor Daniel Tarullo stated in a speech at the National Association of Insurance Commissioners' International Insurance Forum—this is May 20 of 2016—he said, quote:

"There are, as you all know, a lot of ideas out there as to how we should construct the capital requirements we will apply to insurance companies. Some, such as variations on the Solvency II approach used in the European Union, strike us as unpromising.

"Evaluation frameworks for insurance liabilities adopted in Solvency II differ starkly from U.S. GAAP and may introduce excessive volatility. Such an approach would also be inconsistent with our preferred or strong preference for building a predominantly standardized risk-based capital rule that enables comparisons across firms without excessive reliance on internal models."

"Finally"—this is a mouthful, isn't it—"Finally, it appears that Solvency II could be quite pro-cyclical."

So do you agree with what Governor Tarullo said there?

Mr. POWELL. It makes sense to me. I have to admit I don't recall that speech and what issue he was talking about there.

Mr. BUDD. About Solvency II, being used by the EU, being procyclical rather than countercyclical.

Mr. POWELL. I would want to check with our insurance capital experts. But, yes, I do believe that, I think that reflects our view.

Mr. BUDD. Good. Can you give us any explanation as to why the Federal Reserve staff participating in the Kuala Lumpur negotiations agreed to accede to the Europeans at the IAIS to mandate that the financial reporting for the referenced ICS be done using a Solvency II approach—what we just talked about—Solvency II approach, and not something more suitable for the U.S. insurance industry, like GAAP or statutory accounting?

Mr. POWELL. I will have to check up on this. I don't have this kind of detail.

Mr. BUDD. Pretty in the weeds, but I appreciate you thinking through it. And if we could give that back. Thank you.

And finally, do you agree with Governor Tarullo that a Solvency II accounting approach introduces excessive volatility into the U.S. insurance markets? And if so, how do you plan on remedying this at the next IAIS negotiations on ICS?

Mr. POWELL. I am really going to have to go—

Mr. BUDD. We just delved further into these weeds.

Well, if we could get a response it would be great, at another time.

Thank you so much, again, for your time.

Mr. Chairman, I yield back. Thank you.

Mr. POWELL. Thank you.

Chairman HENSARLING. The gentleman yields back.

I would like to thank Chairman Powell for his testimony today.

The Chair notes that some Members may have additional questions for this panel, which they may wish to submit in writing. Without objection, the hearing record will remain open for 5 legislative days for Members to submit written questions to these witnesses and to place their responses in the record. Also, without objection, Members will have 5 legislative days to submit extraneous materials to the Chair for inclusion in the record.

I would ask Chairman Powell that you respond as promptly as you are able.

This hearing stands adjourned.

[Whereupon, at 1:28 p.m., the committee was adjourned.]

A P P E N D I X

July 18, 2018

For release at
8:30 a.m. EDT
July 18, 2018

Statement by

Jerome H. Powell

Chairman

Board of Governors of the Federal Reserve System

before the

Committee on Financial Services

U.S. House of Representatives

July 18, 2018

Good morning. Chairman Hensarling, Ranking Member Waters, and other members of the Committee, I am happy to present the Federal Reserve's semiannual *Monetary Policy Report* to the Congress.

Let me start by saying that my colleagues and I strongly support the goals the Congress has set for monetary policy--maximum employment and price stability. We also support clear and open communication about the policies we undertake to achieve these goals. We owe you, and the public in general, clear explanations of what we are doing and why we are doing it. Monetary policy affects everyone and should be a mystery to no one. For the past three years, we have been gradually returning interest rates and the Fed's securities holdings to more normal levels as the economy strengthens. We believe this is the best way we can help set conditions in which Americans who want a job can find one, and in which inflation remains low and stable.

I will review the current economic situation and outlook and then turn to monetary policy.

Current Economic Situation and Outlook

Since I last testified here in February, the job market has continued to strengthen and inflation has moved up. In the most recent data, inflation was a little above 2 percent, the level that the Federal Open Market Committee, or FOMC, thinks will best achieve our price stability and employment objectives over the longer run. The latest figure was boosted by a significant increase in gasoline and other energy prices.

An average of 215,000 net new jobs were created each month in the first half of this year. That number is somewhat higher than the monthly average for 2017. It is also a good deal higher than the average number of people who enter the work force each month on net. The unemployment rate edged down 0.1 percentage point over the first half of the year to 4.0 percent in June, near the lowest level of the past two decades. In addition, the share of the population that either has a job or has looked for one in the past month--the labor force participation rate--has not changed much since late 2013. This development is another sign of labor market strength. Part of what has kept the participation rate stable is that more working-age people have started looking for a job, which has helped make up for the large number of baby boomers who are retiring and leaving the labor force.

Another piece of good news is that the robust conditions in the labor market are being felt by many different groups. For example, the unemployment rates for African Americans and Hispanics have fallen sharply over the past few years and are now near their lowest levels since the Bureau of Labor Statistics began reporting data for these groups in 1972. Groups with higher unemployment rates have tended to benefit the most as the job market has strengthened. But jobless rates for these groups are still higher than those for whites. And while three-fourths of whites responded in a recent Federal Reserve survey that they were doing at least okay financially in 2017, only two-thirds of African Americans and Hispanics responded that way.

Incoming data show that, alongside the strong job market, the U.S. economy has grown at a solid pace so far this year. The value of goods and services produced in the economy--or gross domestic product--rose at a moderate annual rate of 2 percent in the first quarter after adjusting for inflation. However, the latest data suggest that economic growth in the second quarter was considerably stronger than in the first. The solid pace of growth so far this year is based on several factors. Robust job gains, rising after-tax incomes, and optimism among households have lifted consumer spending in recent months. Investment by businesses has continued to grow at a healthy rate. Good economic performance in other countries has supported U.S.

exports and manufacturing. And while housing construction has not increased this year, it is up noticeably from where it stood a few years ago.

I will turn now to inflation. After several years in which inflation ran below our 2 percent objective, the recent data are encouraging. The price index for personal consumption expenditures, which is an overall measure of prices paid by consumers, increased 2.3 percent over the 12 months ending in May. That number is up from 1.5 percent a year ago. Overall inflation increased partly because of higher oil prices, which caused a sharp rise in gasoline and other energy prices paid by consumers. Because energy prices move up and down a great deal, we also look at core inflation. Core inflation excludes energy and food prices and generally is a better indicator of future overall inflation. Core inflation was 2.0 percent for the 12 months ending in May, compared with 1.5 percent a year ago. We will continue to keep a close eye on inflation with the goal of keeping it near 2 percent.

Looking ahead, my colleagues on the FOMC and I expect that, with appropriate monetary policy, the job market will remain strong and inflation will stay near 2 percent over the next several years. This judgment reflects several factors. First, interest rates, and financial conditions more broadly, remain favorable to growth. Second, our financial system is much stronger than before the crisis and is in a good position to meet the credit needs of households and businesses. Third, federal tax and spending policies likely will continue to support the expansion. And, fourth, the outlook for economic growth abroad remains solid despite greater uncertainties in several parts of the world. What I have just described is what we see as the most likely path for the economy. Of course, the economic outcomes we experience often turn out to be a good deal stronger or weaker than our best forecast. For example, it is difficult to predict the ultimate outcome of current discussions over trade policy as well as the size and timing of the economic effects of the recent changes in fiscal policy. Overall, we see the risk of the economy unexpectedly weakening as roughly balanced with the possibility of the economy growing faster than we currently anticipate.

Monetary Policy

Over the first half of 2018 the FOMC has continued to gradually reduce monetary policy accommodation. In other words, we have continued to dial back the extra boost that was needed to help the economy recover from the financial crisis and recession. Specifically, we raised the target range for the federal funds rate by 1/4 percentage point at both our March and June meetings, bringing the target to its current range of 1-3/4 to 2 percent. In addition, last October we started gradually reducing the Federal Reserve's holdings of Treasury and mortgage-backed securities. That process has been running smoothly. Our policies reflect the strong performance of the economy and are intended to help make sure that this trend continues. The payment of interest on balances held by banks in their accounts at the Federal Reserve has played a key role in carrying out these policies, as the current *Monetary Policy Report* explains. Payment of interest on these balances is our principal tool for keeping the federal funds rate in the FOMC's target range. This tool has made it possible for us to gradually return interest rates to a more normal level without disrupting financial markets and the economy.

As I mentioned, after many years of running below our longer-run objective of 2 percent, inflation has recently moved close to that level. Our challenge will be to keep it there. Many factors affect inflation--some temporary and others longer lasting. Inflation will at times be above 2 percent and at other times below. We say that the 2 percent objective is "symmetric" because the FOMC would be concerned if inflation were running persistently above or below our objective.

The unemployment rate is low and expected to fall further. Americans who want jobs have a good chance of finding them. Moreover, wages are growing a little faster than they did a few years ago. That said, they still are not rising as fast as in the years before the crisis. One explanation could be that productivity growth has been low in recent years. On a brighter note, moderate wage growth also tells us that the job market is not causing high inflation.

With a strong job market, inflation close to our objective, and the risks to the outlook roughly balanced, the FOMC believes that--for now--the best way forward is to keep gradually raising the federal funds rate. We are aware that, on the one hand, raising interest rates too slowly may lead to high inflation or financial market excesses. On the other hand, if we raise rates too rapidly, the economy could weaken and inflation could run persistently below our objective. The Committee will continue to weigh a wide range of relevant information when deciding what monetary policy will be appropriate. As always, our actions will depend on the economic outlook, which may change as we receive new data.

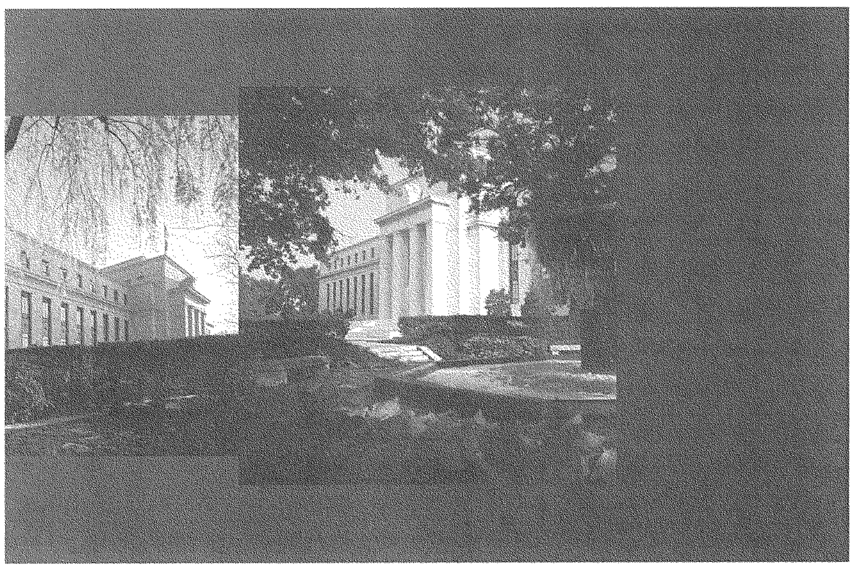
For guideposts on appropriate policy, the FOMC routinely looks at monetary policy rules that recommend a level for the federal funds rate based on the current rates of inflation and unemployment. The July *Monetary Policy Report* gives an update on monetary policy rules and their role in our policy discussions. I continue to find these rules helpful, although using them requires careful judgment.

Thank you. I will now be happy to take your questions.

For use at 11:00 a.m., EDT
July 13, 2018

Monetary Policy Report

July 13, 2018



Board of Governors of the Federal Reserve System

Letter of Transmittal

Board of Governors of the
Federal Reserve System

Washington, D.C., July 13, 2018

The President of the Senate
The Speaker of the House of Representatives

The Board of Governors is pleased to submit its *Monetary Policy Report* pursuant to section 2B of the Federal Reserve Act.

Sincerely,

Jerome H. Powell

Jerome H. Powell, Chairman

Statement on Longer-Run Goals and Monetary Policy Strategy

Adopted effective January 24, 2012; as amended effective January 30, 2018

The Federal Open Market Committee (FOMC) is firmly committed to fulfilling its statutory mandate from the Congress of promoting maximum employment, stable prices, and moderate long-term interest rates. The Committee seeks to explain its monetary policy decisions to the public as clearly as possible. Such clarity facilitates well-informed decisionmaking by households and businesses, reduces economic and financial uncertainty, increases the effectiveness of monetary policy, and enhances transparency and accountability, which are essential in a democratic society.

Inflation, employment, and long-term interest rates fluctuate over time in response to economic and financial disturbances. Moreover, monetary policy actions tend to influence economic activity and prices with a lag. Therefore, the Committee's policy decisions reflect its longer-run goals, its medium-term outlook, and its assessments of the balance of risks, including risks to the financial system that could impede the attainment of the Committee's goals.

The inflation rate over the longer run is primarily determined by monetary policy, and hence the Committee has the ability to specify a longer-run goal for inflation. The Committee reaffirms its judgment that inflation at the rate of 2 percent, as measured by the annual change in the price index for personal consumption expenditures, is most consistent over the longer run with the Federal Reserve's statutory mandate. The Committee would be concerned if inflation were running persistently above or below this objective. Communicating this symmetric inflation goal clearly to the public helps keep longer-term inflation expectations firmly anchored, thereby fostering price stability and moderate long-term interest rates and enhancing the Committee's ability to promote maximum employment in the face of significant economic disturbances. The maximum level of employment is largely determined by nonmonetary factors that affect the structure and dynamics of the labor market. These factors may change over time and may not be directly measurable. Consequently, it would not be appropriate to specify a fixed goal for employment; rather, the Committee's policy decisions must be informed by assessments of the maximum level of employment, recognizing that such assessments are necessarily uncertain and subject to revision. The Committee considers a wide range of indicators in making these assessments. Information about Committee participants' estimates of the longer-run normal rates of output growth and unemployment is published four times per year in the FOMC's Summary of Economic Projections. For example, in the most recent projections, the median of FOMC participants' estimates of the longer-run normal rate of unemployment was 4.6 percent.

In setting monetary policy, the Committee seeks to mitigate deviations of inflation from its longer-run goal and deviations of employment from the Committee's assessments of its maximum level. These objectives are generally complementary. However, under circumstances in which the Committee judges that the objectives are not complementary, it follows a balanced approach in promoting them, taking into account the magnitude of the deviations and the potentially different time horizons over which employment and inflation are projected to return to levels judged consistent with its mandate.

The Committee intends to reaffirm these principles and to make adjustments as appropriate at its annual organizational meeting each January.

Contents

Note: This report reflects information that was publicly available as of noon EDT on July 12, 2018. Unless otherwise stated, the time series in the figures extend through, for daily data, July 11, 2018; for monthly data, June 2018; and, for quarterly data, 2018:Q1. In bar charts, except as noted, the change for a given period is measured to its final quarter from the final quarter of the preceding period.

Summary

Economic activity increased at a solid pace over the first half of 2018, and the labor market has continued to strengthen. Inflation has moved up, and in May, the most recent period for which data are available, inflation measured on a 12-month basis was a little above the Federal Open Market Committee's (FOMC) longer-run objective of 2 percent, boosted by a sizable increase in energy prices. In this economic environment, the Committee judged that current and prospective economic conditions called for a further gradual removal of monetary policy accommodation. In line with that judgment, the FOMC raised the target for the federal funds rate twice in the first half of 2018, bringing it to a range of 1¾ to 2 percent.

Economic and Financial Developments

The labor market. The labor market has continued to strengthen. Over the first six months of 2018, payrolls increased an average of 215,000 per month, which is somewhat above the average pace of 180,000 per month in 2017 and is considerably faster than what is needed, on average, to provide jobs for new entrants into the labor force. The unemployment rate edged down from 4.1 percent in December to 4.0 percent in June, which is about ½ percentage point below the median of FOMC participants' estimates of its longer-run normal level. Other measures of labor utilization were consistent with a tight labor market. However, hourly labor compensation growth has been moderate, likely held down in part by the weak pace of productivity growth in recent years.

Inflation. Consumer price inflation, as measured by the 12-month percentage change in the price index for personal consumption expenditures, moved up from a little below the FOMC's objective of 2 percent at the end of last year to 2.3 percent in May, boosted by a sizable increase in consumer energy prices. The 12-month measure of inflation that excludes food and energy items (so-called core inflation), which historically has been a better indicator of where overall inflation will be in the future than the total figure, was 2 percent in May. This reading was ½ percentage point above where it had been 12 months earlier, as the unusually low readings from last year were not repeated. Measures of longer-run inflation expectations have been generally stable.

Economic growth. Real gross domestic product (GDP) is reported to have increased at an annual rate of 2 percent in the first quarter of 2018, and recent indicators suggest that economic growth stepped up in the second quarter. Gains in consumer spending slowed early in the year, but they rebounded in the spring, supported by strong job gains, recent and past increases in household wealth, favorable consumer sentiment, and higher disposable income due in part to the implementation of the Tax Cuts and Jobs Act. Business investment growth has remained robust, and indexes of business sentiment have been strong. Foreign economic growth has remained solid, and net exports had a roughly neutral effect on real U.S. GDP growth in the first quarter. However, activity in the housing market has leveled off this year.

Financial conditions. Domestic financial conditions for businesses and households have generally continued to support economic growth. After rising steadily through 2017, broad measures of equity prices are modestly higher, on balance, from their levels at the end of last year amid some bouts of heightened volatility in financial markets. While long-term Treasury yields, mortgage rates, and yields on corporate bonds have risen so far this year, longer-term interest rates remain low by historical standards, and corporate bond issuance has continued at a moderate pace. Moreover, most types of consumer loans remained widely available for households with strong creditworthiness, and credit provided by commercial banks continued to expand. The foreign exchange value of the U.S. dollar has appreciated somewhat against the currencies of our trading partners this year, but it remains below its level at the start of 2017. Foreign financial conditions remain generally supportive of growth despite recent increases in financial stress in several emerging market economies.

Financial stability. The U.S. financial system remains substantially more resilient than during the decade before the financial crisis. Asset valuations continue to be elevated despite declines since the end of 2017 in the forward price-to-earnings ratio of equities and the prices of corporate bonds. In the private nonfinancial sector, borrowing among highly levered and lower-rated businesses remains elevated, although the ratio of household debt to disposable income continues to be moderate. Vulnerabilities stemming from leverage in the financial sector remain low, reflecting in part strong capital positions at banks, whereas some measures of hedge fund leverage have increased. Vulnerabilities associated with maturity and liquidity transformation among banks, insurance companies, money market mutual funds, and asset managers remain below levels that generally prevailed before 2008.

Monetary Policy

Interest rate policy. Over the first half of 2018, the FOMC has continued to gradually increase the target range for the federal funds rate. Specifically, the Committee decided to raise the target range for the federal funds rate at its meetings in March and June, bringing it to the current range of 1¾ to 2 percent. The decisions to increase the target range for the federal funds rate reflected the economy's continued progress toward the Committee's objectives of maximum employment and price stability. Even with these policy rate increases, the stance of monetary policy remains accommodative, thereby supporting strong labor market conditions and a sustained return to 2 percent inflation.

The FOMC expects that further gradual increases in the target range for the federal funds rate will be consistent with a sustained expansion of economic activity, strong labor market conditions, and inflation near the Committee's symmetric 2 percent objective over the medium term. Consistent with this outlook, in the most recent Summary of Economic Projections (SEP), which was compiled at the time of the June FOMC meeting, the median of participants' assessments for the appropriate level for the federal funds rate rises gradually over the period from 2018 to 2020 and stands somewhat above the median projection for its longer-run level by the end of 2019 and through 2020. (The June SEP is presented in Part 3 of this report.) However, as the Committee has continued to emphasize, the timing and size of future adjustments to the target range for the federal funds rate will depend on the Committee's assessment of realized and expected economic conditions relative to its maximum-employment objective and its symmetric 2 percent inflation objective.

Balance sheet policy. The FOMC has continued to implement the balance sheet normalization program described in the Addendum to the Policy Normalization Principles and Plans that the Committee issued about a year ago. Specifically, the FOMC has been reducing its holdings of Treasury and agency securities by decreasing, in a gradual and predictable manner, the reinvestment of principal payments it receives from these securities.

Special Topics

Prime-age labor force participation. Labor force participation rates (LFPRs) for men and women between 25 and 54 years old—that is, the share of these individuals either working or actively seeking work—trended lower between 2000 and 2013. Those trends likely reflect numerous factors, including a long-run decline in the demand for workers with lower levels of education and an increase in the share of the population with some form of disability. By contrast, the prime-age LFPR has increased notably since 2013, and the share of nonparticipants who report wanting a job remains above pre-recession levels. Thus, some continuation of the recent increase in the prime-age LFPR may be possible if labor demand remains strong. (See the box "The Labor Force Participation Rate for Prime-Age Individuals" in Part 1.)

Oil prices. Oil prices have climbed rapidly over the past year, reflecting both supply and demand factors. Although higher oil prices are likely to restrain household consumption in the United States, much of the negative effect on GDP from lower consumer spending is likely to be offset by increased production and investment in the growing U.S. oil sector. Consequently, higher oil prices now imply much less of a net overall drag on the economy than they did in the past, although they will continue to have important distributional effects. The negative effect of upward moves in oil prices should get smaller still as U.S. oil production grows and net oil imports decline further. (See the box "The Recent Rise in Oil Prices" in Part 1.)

Monetary policy rules. Monetary policymakers consider a wide range of information on current economic conditions and the outlook when deciding on a policy stance they deem most likely to foster the FOMC's statutory mandate of maximum employment and stable prices. They also routinely consult monetary policy rules that connect prescriptions for the policy interest rate with variables associated with the dual mandate. The use of such rules requires, among other considerations, careful judgments about the choice and measurement of the inputs into the rules such as estimates of the neutral interest rate, which are highly uncertain. (See the box "Complexities of Monetary Policy Rules" in Part 2.)

Interest on reserves. The payment of interest on reserves—balances held by banks in their accounts at the Federal Reserve—is an essential tool for implementing monetary policy because it helps anchor the federal funds rate within the FOMC's target range. This tool has permitted the FOMC to achieve a gradual increase in the federal funds rate in combination with a gradual reduction in the Fed's securities holdings and in the supply of reserve balances. The FOMC judged that removing monetary policy accommodation through first raising the federal funds rate and then beginning to shrink the balance sheet would best contribute to achieving and maintaining maximum employment and price stability without causing dislocations in financial markets or institutions that could put the economic expansion at risk. (See the box "Interest on Reserves and Its Importance for Monetary Policy" in Part 2.)

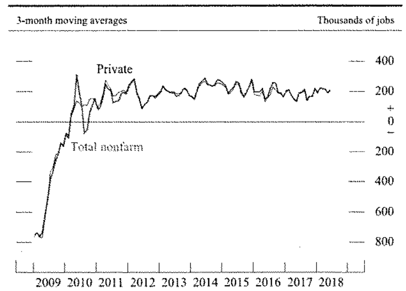
Part 1
Recent Economic and Financial Developments

Domestic Developments

The labor market strengthened further during the first half of the year . . .

Labor market conditions have continued to strengthen so far in 2018. According to the Bureau of Labor Statistics (BLS), gains in total nonfarm payroll employment averaged 215,000 per month over the first half of the year. That pace is up from the average monthly pace of job gains in 2017 and is considerably faster than what is needed to provide jobs for new entrants into the labor force (figure 1).[1] Indeed, the unemployment rate edged down from 4.1 percent in December to 4.0 percent in June (figure 2). This rate is below all Federal Open Market Committee (FOMC) participants' estimates of its longer-run normal level and is about ½ percentage point below the median of those estimates.[2] The unemployment rate in June is close to the lows last reached in 2000.

1. Net change in payroll employment



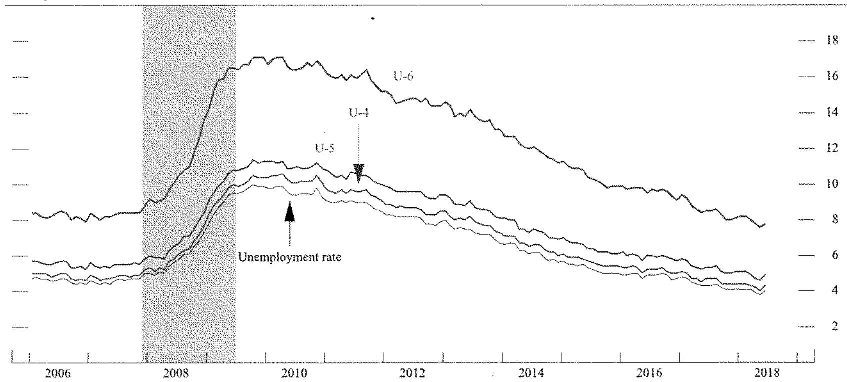
Source: Bureau of Labor Statistics via Haver Analytics.

The labor force participation rate (LFPR), which is the share of individuals aged 16 and older who are either working or actively looking for work, was 62.9 percent in June and has changed little, on net, since late 2013 (figure 3). The aging of the population is an important contributor to a downward trend in the overall participation rate. In particular, members of the baby-boom cohort are increasingly moving into their retirement years, a time when labor force participation is typically low. Indeed, the share of the civilian population aged 65 and over in the United States climbed from 16 percent in 2000 to 19 percent in 2017 and is projected to rise to 24 percent by 2026. Given this trend, the flat trajectory of the

1. Monthly job gains in the range of 130,000 to 160,000 are consistent with an unchanged unemployment rate and an unchanged labor force participation rate.

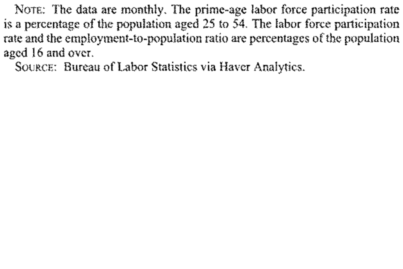
2. See the Summary of Economic Projections in Part 3 of this report.

2. Measures of labor underutilization



NOTE: Unemployment rate measures total unemployed as a percentage of the labor force. U-4 measures total unemployed plus discouraged workers, as a percentage of the labor force plus discouraged workers. Discouraged workers are a subset of marginally attached workers who are not currently looking for work because they believe no jobs are available for them. U-5 measures total unemployed plus all marginally attached to the labor force, as a percentage of the labor force plus persons marginally attached to the labor force. Marginally attached workers are not in the labor force, want and areavailable for work, and have looked for a job in the past 12 months. U-6 measures total unemployed plus all marginally attached workers plus total employed part time for economic reasons, as a percentage of the labor force plus all marginally attached workers. The shaded bar indicates a period of business recession as defined by the National Bureau of Economic Research.
SOURCE: Bureau of Labor Statistics via Haver Analytics.

3. Labor force participation rates and employment-to-population ratio



NOTE: The data are monthly. The prime-age labor force participation rate is a percentage of the population aged 25 to 54. The labor force participation rate and the employment-to-population ratio are percentages of the population aged 16 and over.
SOURCE: Bureau of Labor Statistics via Haver Analytics.

LFPR during the past few years is consistent with strengthening labor market conditions. Similarly, the LFPR for individuals between 25 and 54 years old—which is much less sensitive to population aging—has been rising for the past several years. (The box "The Labor Force Participation Rate for Prime-Age Individuals" examines the prospects for further increases in participation for these individuals.) The employment-to-population ratio for individuals 16 and over—the share of the total population who are working—was 60.4 percent in June and has been gradually increasing since 2011, reflecting the combination of the declining unemployment rate and the flat LFPR.

Other indicators are also consistent with a strong labor market. As reported in the Job Openings and Labor Turnover Survey (JOLTS), the rate of job openings has remained quite elevated.[3] The rate of quits has

3. Indeed, the number of job openings now about matches the number of unemployed individuals.

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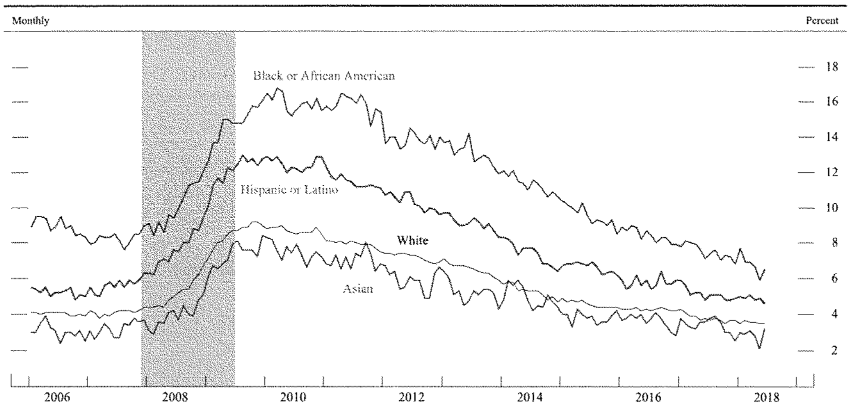
stayed high in the JOLTS, an indication that workers are able to successfully switch jobs when they wish to. In addition, the JOLTS layoff rate has been low, and the number of people filing initial claims for unemployment insurance benefits has remained near its lowest level in decades. Other survey evidence indicates that households perceive jobs as plentiful and that businesses see vacancies as hard to fill. Another indicator, the share of workers who are working part time but would prefer to be employed full time—which is part of the U-6 measure of labor underutilization from the BLS—fell further in the first six months of the year and now stands close to its pre-recession level (as shown in figure 2).

. . . and unemployment rates have fallen for all major demographic groups

The continued decline in the unemployment rate has been reflected in the experiences of multiple racial and ethnic groups (figure 4). The unemployment rates for blacks or African Americans and Hispanics tend to rise considerably more than rates for whites and Asians during recessions but decline

4. Unemployment rate by race and ethnicity



NOTE: Unemployment rate measures total unemployed as a percentage of the labor force. Persons whose ethnicity is identified as Hispanic or Latino may be of any race. The shaded bar indicates a period of business recession as defined by the National Bureau of Economic Research.
SOURCE: Bureau of Labor Statistics via Haver Analytics.

The Labor Force Participation Rate for Prime-Age Individuals

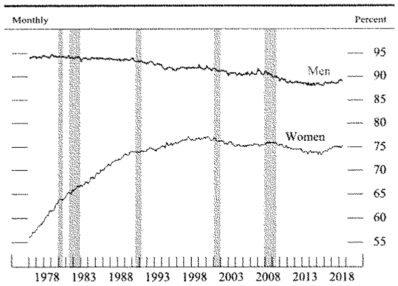
The overall labor force participation rate (LFPR) has generally been trending lower since 2000, and while the aging of the baby-boom generation into retirement ages provides an important reason for that decline, it is not the only reason. Another contributing factor, as shown in figure A, is that the LFPRs of prime-age men and women (those between 25 and 54 years old) trended lower through 2013 even though prime-age LFPRs are largely unaffected by the aging of the population: The prime-age male LFPR has been declining for six decades, and the prime-age female LFPR has drifted lower since 2000 after a multidecade increase. Nevertheless, prime-age LFPRs have moved up notably and consistently since 2013, as improving labor market conditions have drawn some individuals back into the labor force and encouraged others not to leave. These recent increases in the prime-age LFPR, in the context of the longer-run trend decline, raise the question of how much additional scope there is for further increases in prime-age labor force participation.

To gauge whether further increases are possible, a useful starting point is understanding the factors behind the longer-run decline in the prime-age LFPR, as these factors may limit additional increases if they continue to exert some downward pressure. One factor may be a secular decline in the demand for workers with lower levels of education. Indeed, as shown in figure B, the long-run declines in prime-age LFPR are much larger among adults without a college degree than among college-educated adults. Research suggests that increases in automation, such as the use of robotics, and various aspects of globalization have spurred the elimination of some types of jobs—in particular, some manufacturing jobs that have historically been held by workers without a college education—and emerging jobs may require a different set of skills. These developments may have led some workers to become discouraged over the lack of suitable job opportunities and drop out of the labor force.[1] The rising share of college-educated workers, which may partly reflect individuals responding over time to the declining demand for jobs that require less education, has likely prevented even steeper declines in the prime-age LFPR, as better-educated workers have higher LFPRs and may be more adaptable to unforeseen disruptions in particular jobs or industries.

Another potential factor may be that an increasing share of the prime-age population has some difficulty working because of physical or mental disabilities. For example, figure C shows that about 5 percent of both prime-age men and women report that they are out of the labor force and do not want a job due to disability or illness; those shares have trended higher over the past several decades. Other research suggests that increased opioid use may be associated with a lower prime-age LFPR, although it is unclear how much of the decline in the prime-age LFPR can be directly explained by opioid use or whether increases

(continued)

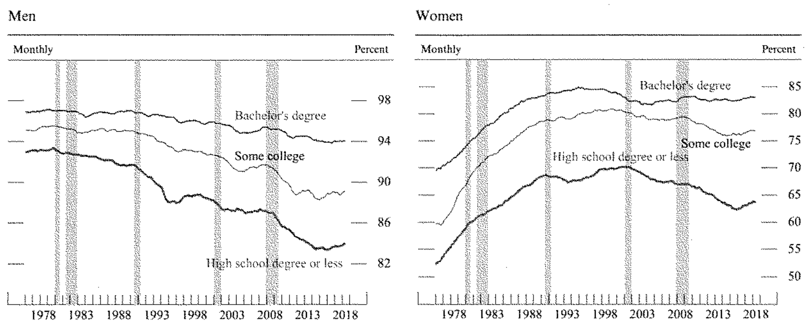
A. Prime-age labor force participation rates



NOTE: The data are seasonally adjusted. The shaded bars indicate periods of business recession as defined by the National Bureau of Economic Research.
SOURCE: Bureau of Labor Statistics.

1. For evidence on displacement from technological changes, see David H. Autor, David Dorn, and Gordon H. Hanson (2015), "Untangling Trade and Technology: Evidence from Local Labor Markets," *Economic Journal*, vol. 125 (May), pp. 621–46; Daron Acemoglu and Pascual Restrepo (2017), "Robots and Jobs: Evidence from U.S. Labor Markets," NBER Working Paper Series 23285 (Cambridge, Mass.: National Bureau of Economic Research, March), www.nber.org/papers/w23285; and Daron Acemoglu and Pascual Restrepo (2018), "Artificial Intelligence, Automation, and Work," NBER Working Paper Series 24196 (Cambridge, Mass.: National Bureau of Economic Research, January), www.nber.org/papers/w24196. For evidence on globalization—in particular, import competition since the 2000s—see David H. Autor, David Dorn, and Gordon H. Hanson (2013), "The China Syndrome: Local Labor Market Effects of Import Competition in the United States," *American Economic Review*, vol. 103 (October), pp. 2121–68. A discussion of these and other explanations is also provided in Katharine G. Abraham and Melissa S. Kearney (2018), "Explaining the Decline in the U.S. Employment-to-Population Ratio: A Review of the Evidence," NBER Working Paper Series 24333 (Cambridge, Mass.: National Bureau of Economic Research, February), www.nber.org/papers/w24333.

B. Prime-age labor force participation rates by education



NOTE: The data are seasonally adjusted 12-month moving averages and extend through May 2018. The shaded bars indicate periods of business recession as defined by the National Bureau of Economic Research.
SOURCE: U.S. Census Bureau, Current Population Survey.

in opioid use are an indirect result of poor employment opportunities.[2]

Caregiving responsibilities play an important role in explaining why LFPRs for prime-age women are lower than for men, and they may play an increasing role in explaining declining prime-age LFPRs for men as well. As shown in figure C, roughly 15 percent of prime-age women report being out of the labor force for caregiving reasons—by far the largest reason for prime-age women to report not wanting a job—but this share has been fairly flat over time. In contrast, while a much smaller fraction of men are out of the labor force for caregiving reasons, that share has trended up in recent decades, likely reflecting some shift in household responsibilities as women participate in the workforce in greater numbers. For some—especially those for whom childcare costs are not a major concern—not participating in the labor force may represent an unconstrained choice to care for other members of their families. For others, however, this decision may reflect a lack of affordable childcare.

Additionally, the share of the population—particularly black men—with a history of incarceration has increased over time. Individuals who have previously been incarcerated often have trouble finding work, in part because many employers choose not to hire people with such a background and likely also in part because incarceration prevents people from accumulating work experience and developing skills valuable to employers. Discrimination could also help explain the lack of participation for some minority groups, as they recognize that such discrimination limits their job opportunities.

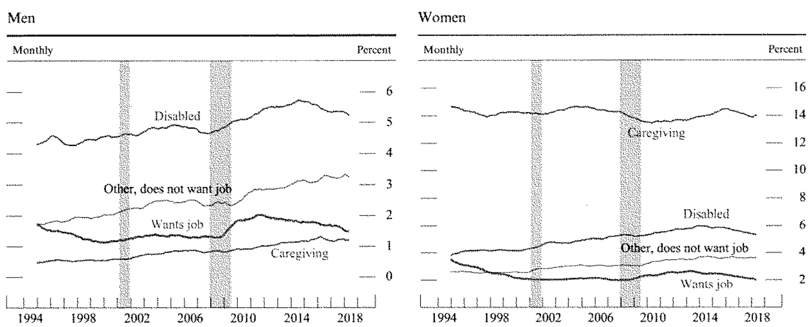
International comparisons may help clarify the importance of some of those factors. Since 1990, the

(continued on next page)

2. Evidence that opioid use could be significant for understanding the declining LFPR is provided by Alan B. Krueger (2017), "Where Have All the Workers Gone? An Inquiry into the Decline of the U.S. Labor Force Participation Rate," *Brookings Papers on Economic Activity*, Fall, pp. 1–82, https://www.brookings.edu/wp-content/uploads/2018/02/kruegertextfa17bpea.pdf, while little relationship between opioid prescriptions and employment at the county level is found in Janet Currie, Jonas Y. Jin, and Molly Schnell (2018), "U.S. Employment and Opioids: Is There a Connection?" NBER Working Paper Series 24440 (Cambridge, Mass.: National Bureau of Economic Research, March), www.nber.org/papers/w24440. Some evidence on whether the opioid epidemic varies with local economic conditions is provided by Jeff Larrimore, Alex Durante, Kimberly Kreiss, Ellen Merry, Christina Park, and Claudia Sahm (2018), "Shedding Light on Our Economic and Financial Lives," FEDS Notes, https://www.federalreserve.gov/econres/notes/feds-notes/shedding-light-on-our-economic-and-financial-lives-20180522.htm.

The Labor Force Participation Rate *(continued)*

C. Prime-age nonparticipation by reason



NOTE: The data are seasonally adjusted 12-month moving averages and extend through May 2018. The shaded bars indicate periods of business recession as defined by the National Bureau of Economic Research.
SOURCE: U.S. Census Bureau, Current Population Survey.

prime-age LFPR in the United States has declined considerably for both men and women relative to other advanced countries. Some factors, like automation and globalization, have affected all advanced economies to some degree and for some time, yet diverging long-run trends in prime-age labor force participation have still occurred. Research suggests that part of the relative decline in the United States is explained by differential changes in work-family policies across countries. Other parts of the divergence may be explained by other policies, including policies designed toward keeping those affected by automation and globalization attached to the labor force, or other factors—such as incarceration or opioid use—that differ across those countries.[3]

Although many of the factors behind the multidecade decline in the prime-age LFPR may persist, some continuation of the increases in the LFPR over the past few years nevertheless seems possible, especially if labor market conditions remain favorable. Indeed, as shown in figure C, although the share of nonparticipating prime-age men and women who self-report as wanting a job (despite not having actively searched for a job recently) has been declining since 2010, that share for men remains between ¼ and ½ percentage point above its 2007 level and earlier expansion peaks. Furthermore, prime-age men and women who had previously reported being out of the labor force and not wanting a job due to disability or illness have been entering the labor force at increasing rates in recent years.

Looking forward, how can policymakers support additional improvements in the prime-age LFPR? Favorable labor market conditions can likely help, and monetary policy can therefore play a role through supporting strong cyclical conditions as part of its maximum-employment objective. However, structural factors (in contrast with cyclical ones) are also important to address; policies to address such factors are beyond the scope of monetary policy.

3. For recent trends on prime-age LFPRs in the United States compared with other developed countries, see Organisation for Economic Co-operation and Development (2018), *OECD Economic Surveys: United States 2018* (Paris: OECD Publishing), dx.doi.org/10.1787/eco_surveys-usa-2018-en. For a description of policy differences across countries and how this may affect differences in LFPR, see International Monetary Fund (2018), "Labor Force Participation in Advanced Economies: Drivers and Prospects," chapter 2 in *World Economic Outlook: Cyclical Upswing, Structural Change* (Washington: IMF, April), pp. 71–128. For evidence on how work-family policies may affect prime-age LFPRs in the United States relative to other OECD countries, see Francine D. Blau and Lawrence M. Kahn (2013), "Female Labor Supply: Why Is the United States Falling Behind?" *American Economic Review*, vol. 103 (May), pp. 251–56.

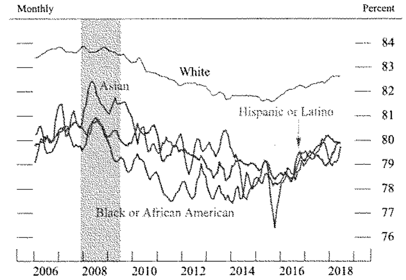
more rapidly during expansions. Indeed, the declines in the unemployment rates for blacks and Hispanics have been particularly striking, and the rates have recently been at or near their lowest readings since these series began in the early 1970s. Although differences in unemployment rates across ethnic and racial groups have narrowed in recent years, they remain substantial and similar to pre-recession levels. The rise in LFPRs for prime-age individuals over the past few years has also been evident in each of these racial and ethnic groups, with increases again particularly notable for African Americans. Even so, the LFPR for whites remains higher than that for the other groups (figure 5).[4]

Increases in labor compensation have been moderate . . .

Despite the strong labor market, the available indicators generally suggest that increases in hourly labor compensation have been moderate. Compensation per hour in the business sector—a broad-based measure of wages, salaries, and benefits that is quite volatile—rose 2¾ percent over the four quarters ending in 2018:Q1, slightly more than the average annual increase over the preceding seven or so years (figure 6). The employment cost index—a less volatile measure of both wages and the cost to employers of providing benefits—likewise was 2¾ percent higher in the first quarter of 2018 relative to its year-earlier level; this increase was ½ percentage point faster than its gain a year earlier. Among measures that do not account for benefits, average hourly earnings rose 2¾ percent in June relative to 12 months earlier, a gain in line with the average increase in the preceding few years. According to the Federal Reserve Bank of Atlanta, the median 12-month wage

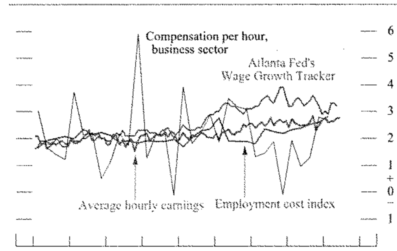
4. The lower levels of labor force participation for these other groups differ importantly by sex. For African Americans, men have a lower participation rate relative to white men, while the participation rate for African American women is as high as that of white women. By contrast, the lower LFPRs for Hispanics and Asians reflect lower participation among women.

5. Prime-age labor force participation rate by race and ethnicity



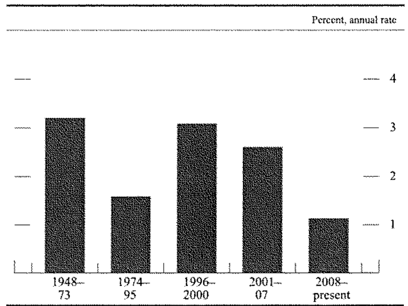
NOTE: The prime-age labor force participation rate is a percentage of the population aged 25 to 54. Persons whose ethnicity is identified as Hispanic or Latino may be of any race. The data are seasonally adjusted by Board staff and are 3-month moving averages. The shaded bar indicates a period of business recession as defined by the National Bureau of Economic Research.
SOURCE: Bureau of Labor Statistics.

6. Measures of change in hourly compensation



NOTE: Business-sector compensation is on a 4-quarter percentage change basis. For the employment cost index, change is over the 12 months ending in the last month of each quarter; for average hourly earnings, change is from 12 months earlier; for the Atlanta Fed's Wage Growth Tracker, the data are shown as a 3-month moving average of the 12-month percent change and extend through May 2018.
SOURCE: Bureau of Labor Statistics via Haver Analytics; Federal Reserve Bank of Atlanta, Wage Growth Tracker.

7. Change in business-sector output per hour



NOTE: Changes are measured from Q4 of the year immediately preceding the period through Q4 of the final year of the period. The final period is measured from 2007:Q4 through 2018:Q1.
SOURCE: Bureau of Labor Statistics via Haver Analytics.

growth of individuals reporting to the Current Population Survey increased about 3¼ percent in May, also similar to its readings from the past few years.[5]

. . . and likely have been restrained by slow growth of labor productivity

Those moderate rates of compensation gains likely reflect the offsetting influences of a strong labor market and persistently weak productivity growth. Since 2008, labor productivity has increased only a little more than 1 percent per year, on average, well below the average pace from 1996 through 2007 of 2.8 percent and also below the average gain in the 1974–95 period of 1.6 percent (figure 7). The weakness in productivity growth may be partly attributable to the sharp pullback in capital investment during the most recent recession and the relatively slow recovery that followed. However, considerable debate remains about the reasons for the recent slowdown in productivity growth and whether it will persist.[6]

Price inflation has picked up from the low readings in 2017

In 2017, inflation remained below the FOMC's longer-run objective of 2 percent. Partly because the softness in some price categories appeared idiosyncratic, Federal Reserve policymakers expected inflation to move higher in 2018.[7] This expectation appears to be

5. The Atlanta Fed's measure differs from others in that it measures the wage growth only of workers who were employed both in the current survey month and 12 months earlier.

6. The box "Productivity Developments in the Advanced Economies" in the July 2017 *Monetary Policy Report* provides more information. See Board of Governors of the Federal Reserve System (2017), *Monetary Policy Report* (Washington: Board of Governors, July), pp. 12–13, https://www.federalreserve.gov/monetarypolicy/2017-07-mpr-part1.htm.

7. Additional details can be found in the June 2017 Summary of Economic Projections, an addendum to the minutes of the June 2017 FOMC meeting. See Board of Governors of the Federal Reserve System (2017), "Minutes of the Federal Open Market Committee,

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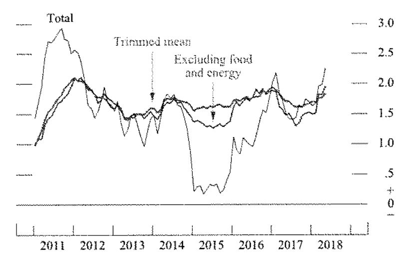
on track so far. Consumer price inflation, as measured by the 12-month percentage change in the price index for personal consumption expenditures (PCE), moved up to 2.3 percent in May (figure 8). Core PCE inflation, which excludes consumer food and energy prices that are often quite volatile and typically provides a better indication than the total measure of where overall inflation will be in the future, was 2 percent over the 12 months ending in May—0.5 percentage point higher than it had been one year earlier. The total measure exceeded core inflation because of a sizable increase in consumer energy prices. In contrast, food price inflation has continued to be low by historical standards—data through May show the PCE price index for food and beverages having increased less than ½ percent over the past year.

The higher readings in both total and core inflation relative to a year earlier reflect faster price increases for a wide range of goods and services this year and the dropping out of the 12-month calculation of the steep one-month decline in the price index for wireless telephone services in March last year. The 12-month change in the trimmed mean PCE price index—an alternative indicator of underlying inflation produced by the Federal Reserve Bank of Dallas that may be less sensitive than the core index to idiosyncratic price movements—slowed by less than core inflation over 2017 and has also increased a bit less this year. This index rose 1.8 percent over the 12 months ending in May, up a touch from the increase over the same period last year.[8]

8. Change in the price index for personal consumption expenditures

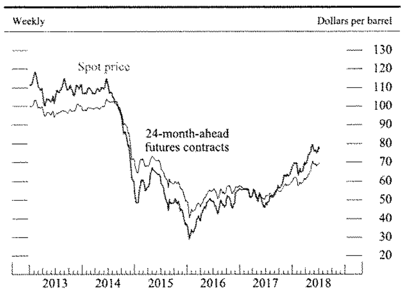


NOTE: The data extend through May 2018; changes are from one year earlier.
SOURCE: For trimmed mean, Federal Reserve Bank of Dallas; for all else, Bureau of Economic Analysis; all via Haver Analytics.

June 13–14, 2017," press release, July 5, https://www.federalreserve.gov/newsevents/pressreleases/monetary20170705a.htm.

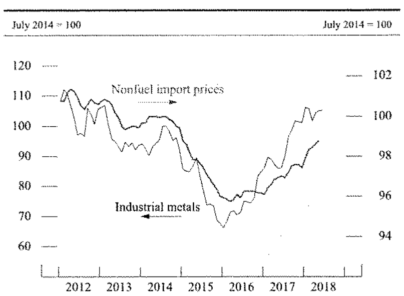
8. The trimmed mean index excludes whatever prices showed the largest increases or decreases in a given month; for example, the sharp decline in prices for wireless telephone services in March 2017 was excluded from this index.

9. Brent spot and futures prices



NOTE: The data are weekly averages of daily data and extend through July 11, 2018.
SOURCE: ICE Brent Futures via Bloomberg.

10. Nonfuel import prices and industrial metals indexes



NOTE: The data for nonfuel import prices are monthly and extend through May 2018. The data for industrial metals are a monthly average of daily data and extend through June 29, 2018.
SOURCE: For nonfuel import prices, Bureau of Labor Statistics; for industrial metals, S&P GSCI Industrial Metals Spot Index via Haver Analytics.

Oil prices have surged amid supply concerns . . .

As noted, the faster pace of total inflation this year relative to core inflation reflects a substantial rise in consumer energy prices. Retail gasoline prices this year were driven higher by a rise in oil prices. The spot price of Brent crude oil rose from about \$65 per barrel in December to around \$75 per barrel in early July (figure 9). Although that increase took place against a backdrop of continued strength in global demand, supply concerns have become more prevalent in recent months. (For a discussion of the reasons behind the oil price increases along with a review of the effects of oil prices on U.S. economic growth, see the box "The Recent Rise in Oil Prices.")

. . . while prices of imports other than energy have also increased

Nonfuel import prices rose sharply in early 2018, partly reflecting the pass-through of earlier increases in commodity prices (figure 10). In particular, metals prices posted sizable gains late last year due to strong global demand but have retreated somewhat in recent weeks.

Survey-based measures of inflation expectations have been stable . . .

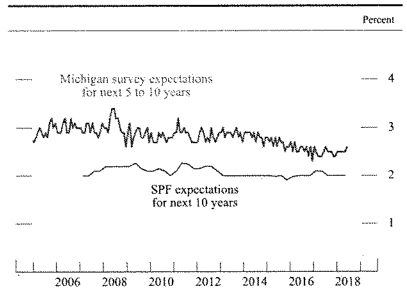
Expectations of inflation likely influence actual inflation by affecting wage- and price-setting decisions. Survey-based measures of inflation expectations at medium- and longer-term horizons have remained generally stable so far this year. In the Survey of Professional Forecasters conducted by the Federal Reserve Bank of Philadelphia, the median expectation for the annual rate of increase in the PCE price index over the next 10 years has been around 2 percent for the past several years (figure 11). In the University of Michigan Surveys of Consumers, the median value for inflation expectations over the next 5 to 10 years has been about 2½ percent since the end of 2016, though this level is about ¼ percentage point lower than had prevailed through 2014. In contrast, in the Survey of Consumer Expectations conducted by the

Federal Reserve Bank of New York, the median of respondents' expected inflation rate three years hence has been moving up recently and is currently at the top of the range it has occupied over the past couple of years.

. . . while market-based measures of inflation compensation have largely moved sideways this year

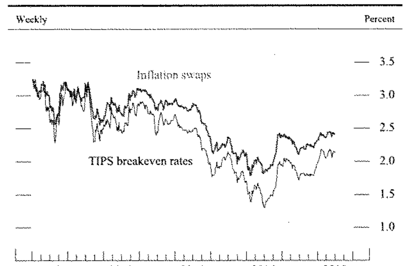
Inflation expectations can also be gauged by market-based measures of inflation compensation. However, the inference is not straightforward, because market-based measures can be importantly affected by changes in premiums that provide compensation for bearing inflation and liquidity risks. Measures of longer-term inflation compensation—derived either from differences between yields on nominal Treasury securities and those on comparable-maturity Treasury Inflation-Protected Securities (TIPS) or from inflation swaps—have moved sideways for the most part this year after having returned to levels seen in early 2017 (figure 12).[9] The TIPS-based measure of 5-to-10-year-forward inflation compensation and the analogous measure of inflation swaps are now about 2 percent and 2½ percent, respectively, with both measures below the ranges that persisted for most of the 10 years before the start of the notable declines in mid-2014.[10]

11. Median inflation expectations



NOTE: The Michigan survey data are monthly. The SPF data for inflation expectations for personal consumption expenditures are quarterly and extend from 2007:Q1 through 2018:Q2.
SOURCE: University of Michigan Surveys of Consumers; Federal Reserve Bank of Philadelphia, Survey of Professional Forecasters (SPF).

12. 5-to-10-year-forward inflation compensation



NOTE: The data are weekly averages of daily data and extend through July 6, 2018. TIPS is Treasury Inflation-Protected Securities.
SOURCE: Federal Reserve Bank of New York; Barclays; Federal Reserve Board staff estimates.

9. Inflation compensation implied by the TIPS breakeven inflation rate is based on the difference, at comparable maturities, between yields on nominal Treasury securities and yields on TIPS, which are indexed to the total consumer price index (CPI). Inflation swaps are contracts in which one party makes payments of certain fixed nominal amounts in exchange for cash flows that are indexed to cumulative CPI inflation over some horizon. Focusing on inflation compensation 5 to 10 years ahead is useful, particularly for monetary policy, because such forward measures encompass market participants' views about where inflation will settle in the long term after developments influencing inflation in the short term have run their course.

10. As these measures are based on CPI inflation, one should probably subtract about ¼ to ½ percentage point—the average differential with PCE inflation over the past two decades—to infer inflation compensation on a PCE basis.

The Recent Rise in Oil Prices

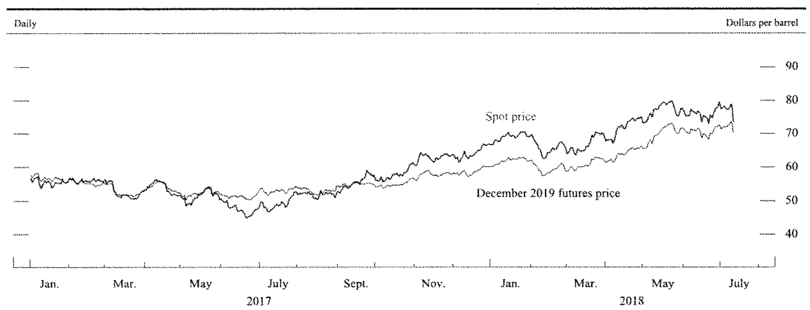
Oil prices have increased more than 50 percent over the past year, with the spot price of Brent crude oil rising from a bit below $50 per barrel to around $75 per barrel (figure A). For much of the period, further-dated futures prices remained relatively stable, in the neighborhood of $55 per barrel; however, since February, futures prices have moved up appreciably, reaching over $70 per barrel.

Both supply and demand factors have contributed to the oil price increase. In particular, the broad-based improvement in the outlook for the global economy was a key driver of the price increase in the second half of 2017. In recent months, supply concerns have become more prevalent, affecting both spot and further-dated futures prices. Despite sharply rising U.S. oil production, markets have been attuned to escalating conflict between Saudi Arabia and Iran as well as the precipitous decline in Venezuelan oil production amid the country's economic and political crisis. Prices also increased after President Trump announced on May 8 that the United States was withdrawing from the Iran nuclear deal and that sanctions against Iranian oil exports would be reinstated.

The pattern of spot and futures prices indicates that market participants generally anticipate that oil prices will decline slowly over the next few years, in part reflecting an expectation that supply, including U.S. shale oil production, will grow to meet demand. In addition, the higher prices put pressure on OPEC's November 2016 agreement with certain non-OPEC countries to restrain production. A stated aim of the agreement was to reduce the glut in global inventories, and, in recent months, inventory levels have fallen rapidly toward long-run averages. In response to both lower inventories and higher prices, OPEC leaders slightly relaxed the production agreement in June this

(continued)

A. Brent spot and futures prices

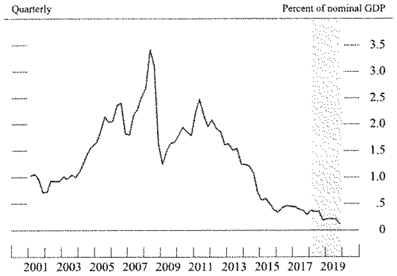


SOURCE: ICE Brent Futures via Bloomberg.

year, reducing some of the upward pressure on prices. That said, futures prices have not returned to their early 2018 levels, implying that market participants expect some of the recent increase in prices to be long lasting.

What is the expected effect of the recent rise in oil prices on the U.S. economy? To begin with, higher oil prices are likely to restrain household consumption. In particular, the increase in oil prices since last year is estimated to have translated into a roughly $300 increase in annual expenditures on gasoline for the average household, from about $2,100 to $2,400. However, as U.S. oil production has grown rapidly over the past decade, the ratio of net U.S. oil imports to U.S. gross domestic product (GDP) has declined substantially (figure B). As a result, higher oil prices now imply much less of a redistribution of purchasing

B. Net oil import share

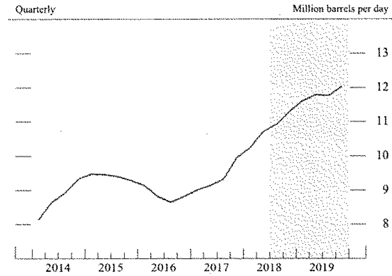


NOTE: The data extending through 2018:Q1 are quarterly averages of daily oil futures prices, quarterly averages of monthly oil imports and exports, and quarterly GDP. The data from 2018:Q2 through 2019:Q4 are projections based on quarterly averages of monthly oil futures prices, quarterly averages of monthly oil imports and exports, and quarterly GDP.
SOURCE: Department of Energy via Haver Analytics; ICE Brent Futures via Bloomberg; Bureau of Economic Analysis; staff calculations.

power abroad than in the past, as much of the negative effect on GDP from lower household consumption is likely to be offset by increased production and investment in the growing U.S. oil sector. On net, the drag on GDP from higher oil prices is likely a small fraction of what it was a decade ago and should get smaller still if U.S. oil production continues to grow as projected—figure C—and the net oil import share shrinks toward zero.

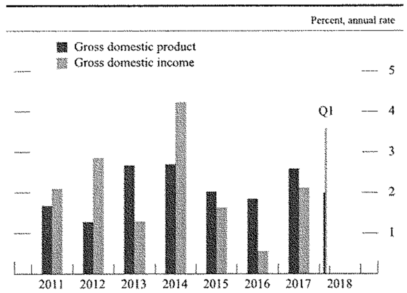
Indeed, if U.S. oil trade moves fully into balance, the offsetting effects of a change in the relative price of oil might be expected to net out within the domestic economy. However, even if the United States is no longer a net oil importer, to the extent that higher oil prices cause credit-constrained consumers to cut spending by more than oil producers expand their investment, this redistribution of purchasing power could still have negative effects on overall GDP.

C. U.S. crude oil production



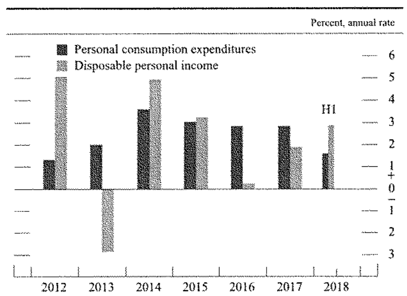
NOTE: The data are quarterly averages of monthly data. The data extend through 2018:Q2. Data from 2018:Q3 through 2019:Q4 are projections.
SOURCE: Department of Energy via Haver Analytics.

13. Change in real gross domestic product and gross domestic income



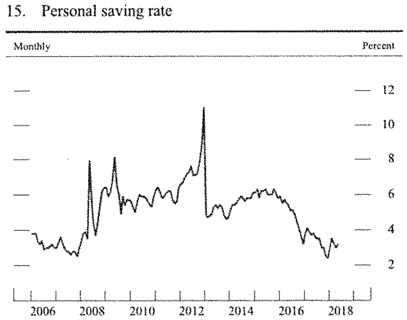
SOURCE: Bureau of Economic Analysis via Haver Analytics.

14. Change in real personal consumption expenditures and disposable personal income



NOTE: The values for 2018:H1 are the annualized May/Q4 changes.
SOURCE: Bureau of Economic Analysis via Haver Analytics.

15. Personal saving rate



NOTE: Data are through May 2018.
SOURCE: Bureau of Economic Analysis via Haver Analytics.

Real gross domestic product growth slowed in the first quarter, but spending by households appears to have picked up in recent months

After having expanded at an annual rate of 3 percent in the second half of 2017, real gross domestic product (GDP) is now reported to have increased 2 percent in the first quarter of this year (figure 13). The step-down in growth during the first quarter was largely attributable to a sharp slowing in the growth of consumer spending that appears transitory, and gains in GDP appear to have rebounded in the second quarter. Meanwhile, business investment has remained strong, and net exports had little effect on output growth in the first quarter. On balance, over the first half of this year, overall economic activity appears to have expanded at a solid pace.

The economic expansion continues to be supported by favorable consumer and business sentiment, past increases in household wealth, solid economic growth abroad, and accommodative domestic financial conditions, including moderate borrowing costs and easy access to credit for many households and businesses.

Gains in income and wealth continue to support consumer spending . . .

Following exceptionally strong growth in the fourth quarter of 2017, consumer spending in the first quarter of this year was tepid, rising at an annual rate of 0.9 percent. The slowdown in growth was evident in outlays for motor vehicles and in retail sales more generally; moreover, unseasonably warm weather depressed spending on energy services. However, consumer spending picked up in more recent months as retail sales firmed, and PCE in April and May rose at an annual rate of 2¼ percent relative to the average over the first quarter (figure 14).

Real disposable personal income (DPI), a measure of after-tax income adjusted for inflation, has increased at a solid annual rate of about 3 percent so far this year. Real DPI has been supported by the reduction in income taxes owing to the implementation of the Tax Cuts and Jobs Act (TCJA) as well as the continued strength in the labor market. With consumer spending rising just a little less than the gains in disposable income so far this year, the personal saving rate has edged up after having fallen for the past two years (figure 15).

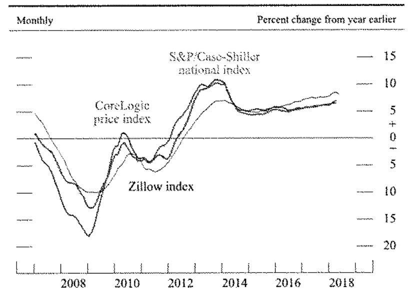
Ongoing gains in household net worth likely have also supported consumer spending. House prices, which are of particular importance for the balance sheet positions of a large set of households, have been increasing at an average annual pace of about 6 percent in recent years (figure 16).[11] Although U.S. equity prices have posted modest gains, on net, so far this year, this flattening followed several years of sizable gains. Buoyed by the cumulative increases in home and equity prices, aggregate household net worth was 6.8 times household income in the first quarter, down just slightly from its ratio in the fourth quarter—the highest-ever reading for that ratio, which dates back to 1947 (figure 17).

. . . and borrowing conditions for consumers remain generally favorable . . .

Financing conditions for consumers are generally favorable and remain supportive of growth in household spending. However, banks have continued to tighten standards for credit cards and auto loans for borrowers with low credit scores, possibly in response to some upward moves in the delinquency rates of those borrowers. Mortgage credit has remained readily available for households with solid credit profiles. For borrowers with low credit scores, mortgage financing conditions have eased somewhat further but remain tight overall. In this environment, consumer credit continued to increase in the first few months of 2018, though the rate of increase moderated some from its robust pace in the previous year (figure 18).

11. For the majority of households, home equity makes up the largest share of their wealth.

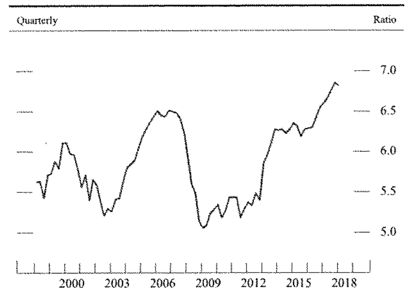
16. Prices of existing single-family houses



Note: The data for the S&P/Case-Shiller index extend through April 2018. The data for the Zillow index and the CoreLogic index extend through May 2018.

Source: CoreLogic Home Price Index; Zillow; S&P/Case-Shiller U.S. National Home Price Index. The S&P/Case-Shiller Index is a product of S&P Dow Jones Indices LLC and/or its affiliates. (For Dow Jones Indices licensing information, see the note on the Contents page.)

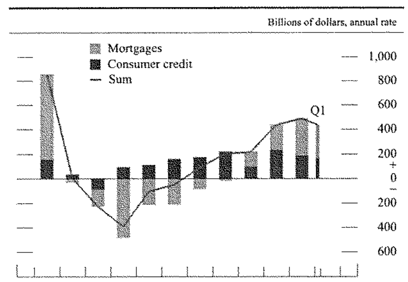
17. Wealth-to-income ratio



Note: The series is the ratio of household net worth to disposable personal income.

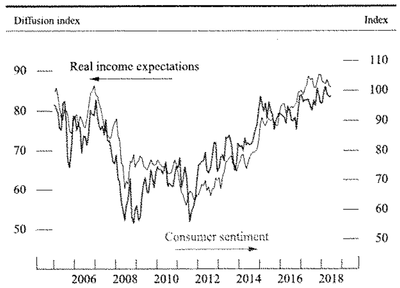
Source: For net worth, Federal Reserve Board, Statistical Release Z.1, "Financial Accounts of the United States"; for income, Bureau of Economic Analysis via Haver Analytics.

18. Changes in household debt



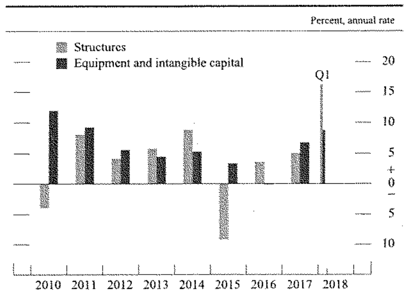
Note: Changes are calculated from year-end to year-end except 2018 changes, which are calculated from 2017:Q4 to 2018:Q1.

19. Indexes of consumer sentiment and income expectations



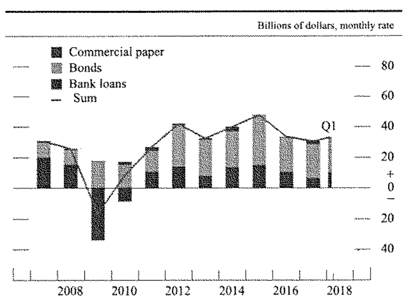
NOTE: The consumer sentiment data are monthly and are indexed to 100 in 1966. The real income expectations data are calculated as the net percentage of survey respondents expecting family income to go up more than prices during the next year or two plus 100 and are shown as a three-month moving average.
SOURCE: University of Michigan Surveys of Consumers.

20. Change in real private nonresidential fixed investment



SOURCE: Bureau of Economic Analysis via Haver Analytics.

21. Selected components of net debt financing for nonfinancial businesses



SOURCE: Federal Reserve Board, Statistical Release Z.1, "Financial Accounts of the United States."

. . . while consumer confidence remains strong

Consumers have remained upbeat. So far this year, the Michigan survey index of consumer sentiment has been near its highest level since 2000, likely reflecting rising income, job gains, and low inflation (figure 19). Indeed, households' expectations for real income changes over the next year or two now stand above levels preceding the previous recession.

Business investment has continued to rebound . . .

Investment spending by businesses has continued to increase so far this year, with notable gains for spending, both on equipment and intangibles and on nonresidential structures (figure 20). Within structures, the rise in oil prices propelled another steep ramp-up in investment in drilling and mining structures—albeit not yet back to the levels recorded from 2012 to 2014—while investment in nonresidential structures outside of the energy sector picked up after declining in 2017. Forward-looking indicators of business investment spending remain favorable on balance. Business sentiment and the profit expectations of industry analysts have been positive overall, while new orders of capital goods have advanced on net this year.

. . . while corporate financing conditions have remained accommodative

Aggregate flows of credit to large nonfinancial firms remained strong in the first quarter, supported in part by relatively low interest rates and accommodative financing conditions (figure 21). The gross issuance of corporate bonds stayed robust during the first half of 2018, while yields on both investment- and speculative-grade corporate bonds moved up notably but remained low by historical standards (figure 22). Despite strong growth in business investment, outstanding commercial and industrial (C&I) loans on banks' books rose only modestly in the first quarter, although their pace of expansion in more recent months has strengthened on average. In

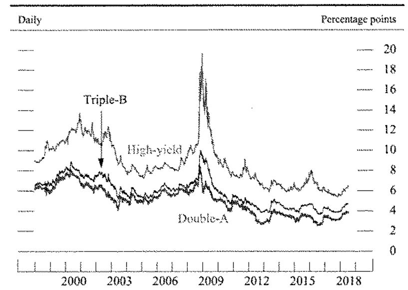
April, respondents to the Senior Loan Officer Opinion Survey on Bank Lending Practices, or SLOOS, reported that demand for C&I loans weakened in the first quarter even as lending standards and terms on such loans eased.[12] Respondents attributed this decline in demand in part to firms drawing on internally generated funds or using alternative sources of financing. Meanwhile, growth in commercial real estate loans has moderated some but remains strong. In addition, financing conditions for small businesses appear to have remained generally accommodative, with lending standards little changed at most banks and with most firms reporting that they are able to obtain credit. Although small business credit growth has been subdued, survey data suggest this sluggishness is largely due to continued weak demand for credit by small businesses.

But activity in the housing sector has leveled off

Residential investment, which rose a modest 2½ percent in 2017, appears to have largely moved sideways over the first five months of the year. The slowing in residential investment likely is partly a result of higher mortgage interest rates. Although these rates are still low by historical standards, they have moved up and are near their highest levels in seven years (figure 23). In addition, higher lumber prices and tight supplies of skilled labor and developed lots reportedly have been restraining home construction. While starts of both single-family and multifamily housing units rose in the fourth quarter, single-family starts have been little changed, on net, since then, whereas multifamily starts continued to climb earlier this year before flattening out (figure 24). Meanwhile, over the first five months of this year, new home sales have held at around the rate of late last year, but sales of existing homes have eased somewhat (figure 25). Despite the continued increases in house prices, the pace of construction has

12. The SLOOS is available on the Board's website at https://www.federalreserve.gov/data/sloos/sloos.htm.

22. Corporate bond yields, by securities rating

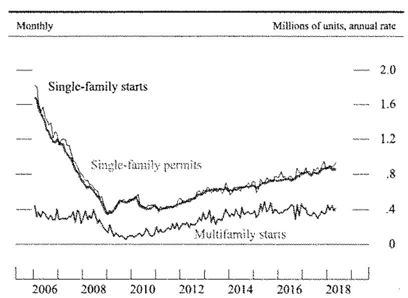


NOTE: The yields shown are yields on 10-year bonds.
SOURCE: ICE Bank of America Merrill Lynch Indices, used with permission.

23. Mortgage rates and housing affordability

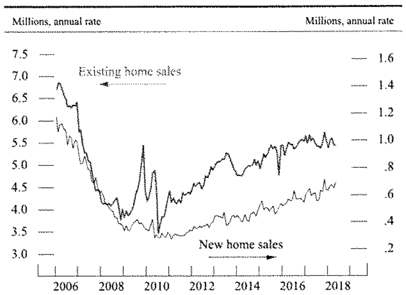
NOTE: The housing affordability index data are monthly through April 2018, and the mortgage rate data are weekly through July 5, 2018. At an index value of 100, a median-income family has exactly enough income to qualify for a median-priced home mortgage. Housing affordability is seasonally adjusted by Board staff.
SOURCE: For housing affordability index, National Association of Realtors; for mortgage rates, Freddie Mac Primary Mortgage Market Survey.

24. Private housing starts and permits



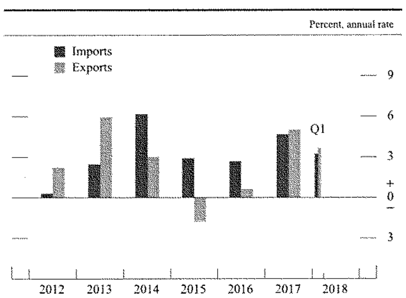
NOTE: The data extend through May 2018.
SOURCE: U.S. Census Bureau via Haver Analytics.

25. New and existing home sales



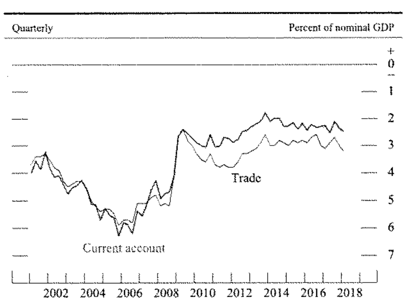
NOTE: Data are monthly and extend through May 2018. New home sales includes only single-family sales. Existing home sales includes single-family, condo, townhome, and co-op sales.
SOURCE: For new home sales, U.S. Census Bureau; for existing home sales, National Association of Realtors; all via Haver Analytics.

26. Change in real imports and exports of goods and services



SOURCE: Bureau of Economic Analysis via Haver Analytics.

27. U.S. trade and current account balances



NOTE: GDP is gross domestic product.
SOURCE: Bureau of Economic Analysis via Haver Analytics.

not kept up with demand. As a result, the months' supply of inventories of homes for sale has remained at a relatively low level, and the aggregate vacancy rate stands at the lowest level since 2003.

Net exports had a neutral effect on GDP growth in the first quarter

After being a small drag on U.S. real GDP growth last year, net exports had a neutral effect on growth in the first quarter. Real U.S. exports increased about 3½ percent at an annual rate, as exports of automobiles and consumer goods remained robust. Real import growth slowed sharply following a surge late last year (figure 26). Nominal trade data through May suggest that export growth picked up in the second quarter, led by agricultural exports, while import growth was tepid. All told, the available data suggest that the nominal trade deficit likely narrowed relative to GDP in the second quarter (figure 27).

Fiscal policy became more expansionary this year . . .

Federal fiscal policy will likely provide a moderate boost to GDP growth this year. The individual and corporate tax cuts in the TCJA should lead to increased private consumption and investment, while the Bipartisan Budget Act of 2018 (BBA) enables increased federal spending on goods and services. As the effects of the BBA had yet to show through, federal government purchases posted only a modest gain in the first quarter (figure 28).

After narrowing significantly for several years, the federal unified deficit widened from about 2½ percent of GDP in fiscal year 2015 to 3½ percent in fiscal 2017, and it is on pace to move up further in fiscal 2018. Although expenditures as a share of GDP in 2017 were relatively stable at 21 percent, receipts moved lower to roughly 17 percent of GDP and have remained at about the same level so far this year (figure 29). The ratio of federal debt held by the public to nominal GDP was 76½ percent at the end of fiscal 2017 and is quite elevated relative to historical norms (figure 30).

. . . and the fiscal position of most state and local governments is stable

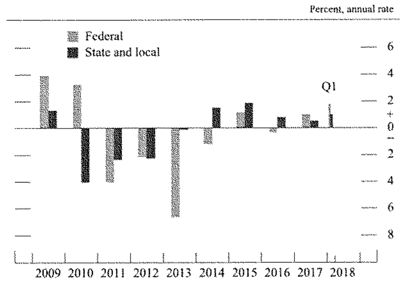
The fiscal position of most state and local governments remains stable, although there is a range of experiences across these governments and some states are still struggling. After several years of slow growth, revenue gains of state governments have strengthened notably as sales and income tax collections have picked up over the past few quarters. In addition, house price gains have continued to push up property tax revenues at the local level. But expenditures by state and local governments have been restrained. Employment growth in this sector has been moderate, while real outlays for construction by these governments have largely been moving sideways at a relatively low level.

Financial Developments

The expected path of the federal funds rate has moved up

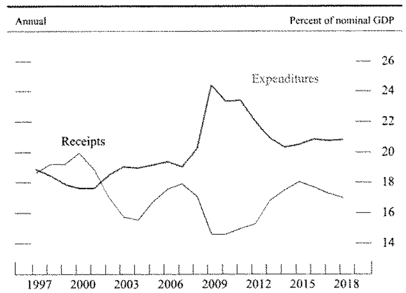
Market-based measures of the path of the federal funds rate continue to suggest that market participants expect further gradual increases in the federal funds rate. Relative to the end of last year, the expected policy rate path has moved up, boosted in part by investors' perception of a strengthening in the domestic economic outlook (figure 31). In particular, the policy path moved higher in response to incoming economic data so far this year, especially the employment reports, which were seen as supporting expectations for a solid pace of growth in domestic economic activity. In addition, investors reportedly interpreted FOMC communications in the first half of 2018 as signaling an upbeat economic outlook and as reinforcing expectations for further gradual removal of monetary policy accommodation.

28. Change in real government expenditures on consumption and investment



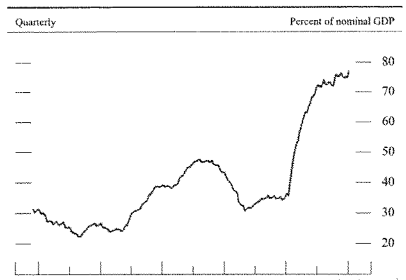
SOURCE: Bureau of Economic Analysis.

29. Federal receipts and expenditures



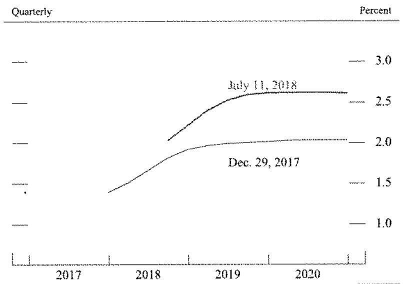
NOTE: Through 2017, receipts and expenditures are for fiscal years (October to September); gross domestic product (GDP) is for the four quarters ending in Q3. For 2018, receipts and expenditures are for the 12 months ending in May; GDP is the average of 2017:Q4 and 2018:Q1. Receipts and expenditures are on a unified-budget basis.
SOURCE: Office of Management and Budget via Haver Analytics.

30. Federal government debt held by the public



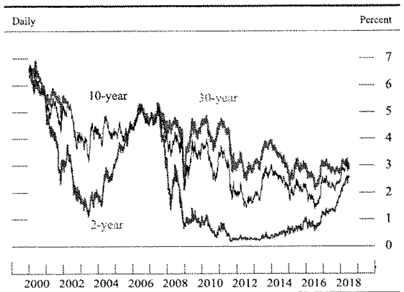
NOTE: The data for gross domestic product (GDP) are at an annual rate. Federal debt held by the public equals federal debt less Treasury securities held in federal employee defined benefit retirement accounts, evaluated at the end of the quarter.
SOURCE: For GDP, Bureau of Economic Analysis via Haver Analytics; for

31. Market-implied federal funds rate



Note: The federal funds rate path is implied by quotes on overnight index swaps—a derivative contract tied to the effective federal funds rate. The implied path as of July 11, 2018, is compared with that as of December 29, 2017. The path is estimated with a spline approach, assuming a term premium of 0 basis points. The paths extend through 2020:Q4.
Source: Bloomberg; Federal Reserve Board staff estimates.

32. Yields on nominal Treasury securities



Note: The Treasury ceased publication of the 30-year constant maturity series on February 18, 2002, and resumed that series on February 9, 2006.
Source: Department of the Treasury.

Survey-based measures of the expected path of the policy rate over the next few years have also increased modestly since the end of last year. According to the results of the most recent Survey of Primary Dealers and Survey of Market Participants, both conducted by the Federal Reserve Bank of New York just before the June FOMC meeting, the median of respondents' projections for the path of the federal funds rate shifted up about 25 basis points for 2018 and beyond, compared with the median of assessments last December.[13] Market-based measures of uncertainty about the policy rate approximately one to two years ahead increased slightly, on balance, from their levels at the end of last year.

The nominal Treasury yield curve has shifted up

The nominal Treasury yield curve has shifted up and flattened somewhat further during the first half of 2018 after flattening considerably in the second half of 2017. In particular, the yields on 2- and 10-year nominal Treasury securities increased about 70 basis points and 45 basis points, respectively, from their levels at the end of 2017 (figure 32). The increase in Treasury yields seems to largely reflect investors' greater optimism about the domestic growth outlook and firming expectations for further gradual removal of monetary policy accommodation. Expectations for increases in the supply of Treasury securities following the federal budget agreement in early February also appear to have contributed to the increase in Treasury yields, while increased concerns about trade policy both domestically and abroad, political developments in Europe, and the foreign economic outlook weighed on longer-dated Treasury yields. Yields on 30-year agency mortgage-backed securities (MBS)—an important determinant of mortgage interest

13. The results of the Survey of Primary Dealers and the Survey of Market Participants are available on the Federal Reserve Bank of New York's website at https://www.newyorkfed.org/markets/primarydealer_survey_questions.html and https://www.newyorkfed.org/markets/survey_market_participants, respectively.

rates—increased about 60 basis points over the first half of the year, a bit more than the rise in the 10-year nominal Treasury yield, but remain low by historical standards (figure 33). Yields on corporate debt securities—both investment grade and high yield—rose more than Treasury yields, leaving the spreads on corporate bond yields over comparable-maturity Treasury yields notably wider than at the beginning of the year.

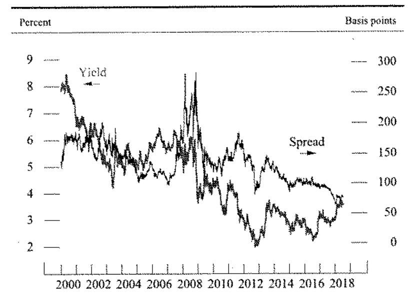
Broad equity indexes rose modestly amid some bouts of market volatility

After surging as much as 20 percent in 2017, broad stock market indexes rose modestly, on balance, so far this year amid some bouts of heightened volatility in financial markets (figure 34). The boost to equity prices from first-quarter earnings reports that generally beat analysts' expectations was reportedly offset by increased uncertainty about trade policy, rising interest rates, and concerns about political developments abroad. While stock prices for companies in the technology and consumer discretionary sectors rose notably, those of companies in the industrial and financial sectors declined modestly. After spiking considerably in early February, the implied volatility for the S&P 500 index—the VIX—declined and ended the period slightly above the low levels that prevailed in 2017. (For a discussion of financial stability issues, see the box "Developments Related to Financial Stability.")

Markets for Treasury securities, mortgage-backed securities, and municipal bonds have functioned well

On balance, indicators of Treasury market functioning remained broadly stable over the first half of 2018. A variety of liquidity metrics—including bid-ask spreads, bid sizes, and estimates of transaction costs—have displayed minimal signs of liquidity pressures overall, with the exception of a brief period of reduced liquidity in early February amid elevated financial market volatility. Liquidity conditions in the agency MBS market were

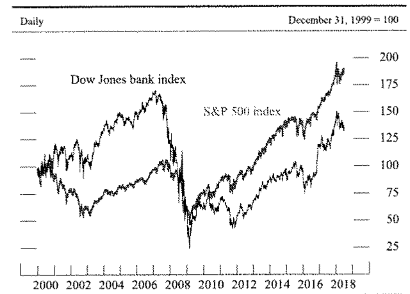
33. Yield and spread on agency mortgage-backed securities



NOTE: The data are daily. Yield shown is for the Fannie Mae 30-year current coupon, the coupon rate at which new mortgage-backed securities would be priced at par, or face, value. Spread shown is to the average of the 5- and 10-year nominal Treasury yields. The data extend through July 11, 2018.

SOURCE: Department of the Treasury; Barclays.

34. Equity prices



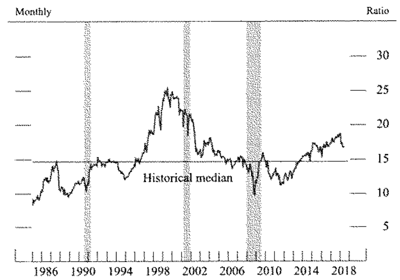
SOURCE: Standard & Poor's Dow Jones Indices via Bloomberg. (For Dow Jones Indices licensing information, see the note on the Contents page.)

Developments Related to Financial Stability

The U.S. financial system remains substantially more resilient than during the decade before the financial crisis.[1] Valuations continue to be elevated for a range of assets. In the private nonfinancial sector, the ratio of total debt to gross domestic product (GDP) is about in line with an estimate of its trend, and vulnerabilities associated with debt remain moderate on balance. While borrowing among highly levered and lower-rated firms is elevated and a future weakening in economic activity could amplify some vulnerabilities in the corporate sector, the ratio of household debt to disposable income has remained stable in recent years. Vulnerabilities associated with leverage in the financial sector appear low, reflecting in part strong capital positions of banks. However, some measures of hedge fund leverage have increased. Vulnerabilities associated with maturity and liquidity transformation continue to be low compared with levels that generally prevailed before 2008.

Valuation pressures in various asset markets remain elevated by historical standards, although they have declined somewhat since the start of the year, as corporate bond prices have fallen and higher earnings have helped rationalize equity prices. Market movements were outsized in February, around the time of the previous *Monetary Policy Report*. Since then, volatility has receded, although it has ended up slightly above the low levels seen in 2017. Even with higher expected earnings due in part to changes in tax law, the forward equity price-to-earnings ratio for the S&P 500 remains in the upper end of its historical distribution (figure A). Treasury term premiums have increased modestly from the beginning of the year but remain low relative to historically observed values. Corporate bond yields and their spreads to yields on comparable-maturity Treasury securities have increased notably, but they continue to be low by historical standards. In particular, speculative-grade yields and spreads lie in the bottom fifth and bottom fourth of their respective historical distributions. In leveraged loan markets, issuance has been robust, spreads have reached their lowest levels since the financial crisis, and the presence of loan covenants has decreased further. In real estate markets, commercial property valuations continue to be stretched. Capitalization rates (computed as the ratio of net operating income relative to property values) remain low, and, in recent quarters, their spreads to yields on 10-year Treasury securities have moved down considerably. Finally, valuation pressures in residential real estate markets increased modestly. Aggregate price-to-rent ratios, adjusted for an estimate of their long-run trend and the carrying cost of housing, are approaching the cycle peaks of the early 1980s and early 1990s but remain well below the levels observed on the eve of the financial crisis.

A. Forward price-to-earnings ratio of S&P 500 firms



NOTE: The data depict the aggregate forward price-to-earnings ratio of S&P 500 firms. The historical median is based on data from 1985 to the present. Shaded bars indicate periods of recession as defined by the National Bureau of Economic Research. Data are based on 12-month-ahead expected earnings per share.

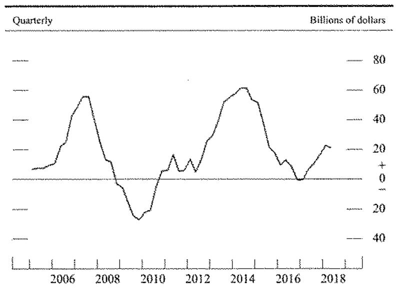
SOURCE: Staff estimates based on Thomson Reuters, IBES.

With households and businesses taken together, the ratio of total debt to GDP is about in line with estimates of its trend, although pockets of stress are evident. In the household sector, the net expansion of household debt has been in line with income growth and is concentrated among prime-rated borrowers. However, delinquency rates for some forms of consumer credit have moved up, suggesting rising strains among riskier borrowers even with unemployment very low. Banks are reportedly tightening standards on credit card and auto loans. In the nonfinancial business sector, leverage of corporate businesses remains high, as indicated by a positive sectoral credit-to-GDP gap. Net issuance of risky debt has risen in recent quarters, mainly driven by the growth in leveraged loans (figure B). While current

(continued)

1. An overview of the framework for assessing financial stability in the United States is provided in Lael Brainard (2018), "An Update on the Federal Reserve's Financial Stability Agenda," speech delivered at the Center for Global Economy and Business, Stern School of Business, New York University, New York, April 3, https://www.federalreserve.gov/newsevents/speech/brainard20180403a.htm.

B. Total net issuance of risky debt



NOTE: Data are 4-quarter moving averages and extend through 2018:Q2. Total net issuance of risky debt is the sum of the net issuance of speculative-grade and unrated bonds and leveraged loans.

SOURCE: Mergent Fixed Investment Securities Database, S&P Leveraged Commentary & Data.

corporate credit conditions are favorable overall, with low interest expenses and defaults, the elevated leverage in this sector could result in higher future default rates. In addition, weak protection from loan covenants could reduce early intervention by lenders and lower recovery rates for investors on default. Investors may also be exposed to significant repricing risks because bond yields and credit risk premiums are both low.

Vulnerabilities from financial-sector leverage continue to be relatively low. Core financial intermediaries, including large banks, insurance companies, and broker-dealers, appear well positioned to weather economic stress. Regulatory capital ratios for the global systemically important banks have remained well above the fully phased-in enhanced regulatory requirements and are close to historical highs. Capital levels at insurance companies and broker-dealers also remain relatively robust by historical standards. However, some indicators of hedge fund leverage in the equity market, such as the provision of total margin credit to equity investors, have risen to historically elevated levels, and in the past few quarters dealers have reportedly eased, on net, price terms to their hedge fund clients.

The results of supervisory stress tests released in June by the Federal Reserve Board confirm that the nation's largest banks are strongly capitalized and would be able to lend to households and businesses even during a severe global recession.[2] The hypothetical "severely adverse" scenario—the most stringent scenario yet used in the Board's stress tests, with the U.S. unemployment rate rising almost 6 percentage points to 10 percent—projects $578 billion in total losses for the 35 participating banks during the nine quarters tested. Since 2009, these firms have added about $800 billion in common equity capital. The Board also evaluates the capital planning processes of the participating banks, including the firms' planned capital actions, such as dividend payments and share buybacks.[3] The Board did not object to the capital plans of 34 firms. Although the recent U.S. tax legislation is expected to increase banks' post-tax earnings, and hence their ability to accrete capital, it did lead to one-time losses, decreasing banks' capital ratios at the end of 2017, the jumping-off point of the stress tests. In part because of these effects, evident in text figure 36, two firms were required to maintain their capital distributions at the levels they paid in recent years. Separately, one firm will be required to address the management and analysis of its counterparty exposure under stress. The Board objected to the capital plan of one bank because of qualitative concerns.

Vulnerabilities associated with liquidity and maturity transformation—that is, the financing of illiquid assets or long-maturity assets with short-maturity debt—continue to be low, owing in part to liquidity regulations for banks and money market reform. Large banks have strong liquidity positions, because their use of core deposits as a source of funding and their holdings of high-quality liquid assets remain near historical highs, while their use of short-term wholesale funding as a share of liabilities is near historical lows. Since the money market fund reforms implemented in October 2016, assets under management at prime funds, institutions that proved vulnerable to runs in the past, have remained far below pre-reform levels. In addition, the growth in alternative short-term investment vehicles, which may have some

(continued on next page)

2. See Board of Governors of the Federal Reserve System (2018), "Federal Reserve Board Releases Results of Supervisory Bank Stress Tests," press release, June 21, https://www.federalreserve.gov/newsevents/pressreleases/bcreg20180621a.htm.

3. See Board of Governors of the Federal Reserve System (2018), "Federal Reserve Releases Results of Comprehensive Capital Analysis and Review (CCAR)," press release, June 29, https://www.federalreserve.gov/newsevents/pressreleases/bcreg20160629a.htm.

Financial Stability *(continued)*

similar vulnerabilities, continues to be limited, as investors have shifted primarily from prime funds into government funds.

Risks from abroad are moderate overall. Advanced foreign economies (AFEs), many of which have significant financial and real linkages to the United States, continue to have notable or elevated valuations in some asset markets and, in a few countries, high levels of household debt relative to GDP. These factors have contributed to some AFEs announcing or implementing macroprudential actions, including increases in countercyclical capital buffers, over the past couple of years. More generally, AFE financial sectors continue their slow pace of deleveraging that started after the global financial and euro-area sovereign debt crises. In addition, low corporate debt spreads in the past few years have yet to translate into any marked increase in leverage in most of these countries' nonfinancial corporate sectors. Some major emerging market economies continue to harbor more pronounced vulnerabilities, reflecting some combination of the following: substantial corporate leverage, fiscal concerns, or excessive reliance on foreign funding. Globally, potential downside risks to international financial markets and financial stability include political uncertainty, an intensification of trade tensions, and challenges posed by rising interest rates.

The countercyclical capital buffer (CCyB) is a macroprudential tool the Federal Reserve Board can use to increase the resilience of the financial system by raising capital requirements on the largest banks. Activating the CCyB is appropriate when systemic vulnerabilities are meaningfully above normal.[4] The Board is closely monitoring the level and configuration of systemic vulnerabilities described earlier.

4. See Board of Governors of the Federal Reserve System (2016), "Regulatory Capital Rules: The Federal Reserve Board's Framework for Implementing the U.S. Basel III Countercyclical Capital Buffer," final policy statement (Docket No. R-1529), *Federal Register*, vol. 81 (September 16), pp. 63682–88.

also generally stable. Overall, the functioning of Treasury and agency MBS markets has not been materially affected by the implementation of the Federal Reserve's balance sheet normalization program, including the accompanying reduction in reinvestment of principal payments from the Federal Reserve's securities holdings. Credit conditions in municipal bond markets have remained stable since the turn of the year. Over that period, yield spreads on 20-year general obligation municipal bonds over comparable-maturity Treasury securities edged up a bit.

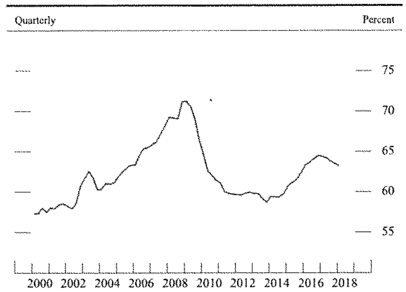
Money market rates have moved up in line with increases in the FOMC's target range

Conditions in domestic short-term funding markets have also remained generally stable so far in 2018. Yields on a broad set of money market instruments moved higher in response to the FOMC's policy actions in March and June. Some money market rates rose during the first quarter more than what would normally occur with monetary tightening. For example, the spreads of certificates of deposit and term London interbank offered rates relative to overnight index swap (OIS) rates increased notably, reportedly reflecting increased issuance of Treasury bills and perhaps also the anticipated tax-induced repatriation of foreign earnings by U.S. corporations. The upward pressure on short-term funding rates, beyond that driven by expected monetary policy, eased in recent months, leading to a narrowing of spreads of some money market rates to OIS rates. However, the spreads remain wider than at the beginning of the year.

Bank credit continued to expand and bank profitability improved

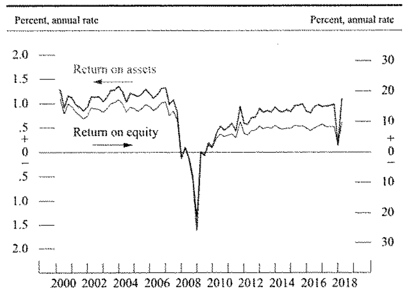
Aggregate credit provided by commercial banks continued to increase through the first quarter of 2018 at a pace similar to the one seen in 2017. Its pace was slower than that of nominal GDP, thus leaving the ratio of total commercial bank credit to current-dollar

35. Ratio of total commercial bank credit to nominal gross domestic product



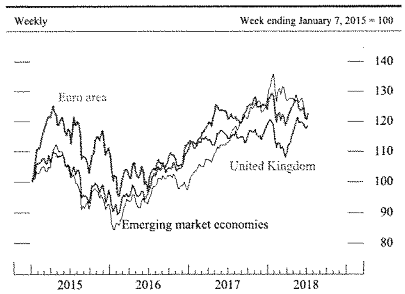
SOURCE: Federal Reserve Board, Statistical Release H.8, "Assets and Liabilities of Commercial Banks in the United States"; Bureau of Economic Analysis via Haver Analytics.

36. Profitability of bank holding companies



NOTE: The data are quarterly and are seasonally adjusted.
SOURCE: Federal Reserve Board, Form FR Y-9C, Consolidated Financial Statements for Bank Holding Companies.

37. Equity indexes for selected foreign economies



NOTE: The data are weekly averages of daily data and extend through July 11, 2018.
SOURCE: For euro area, DJ Euro Stoxx Index; for United Kingdom, FTSE 100 Stock Index; for emerging market economies, MSCI Emerging Markets Local Currency Index; all via Bloomberg.

GDP slightly lower than in the previous year (figure 35). Available data for the second quarter suggest that growth in banks' core loans continued to be moderate. Measures of bank profitability improved in the first quarter of 2018 after having experienced a temporary decline in the last quarter of 2017. Weaker fourth-quarter measures of bank profitability were partly driven by higher write-downs of deferred tax assets in response to the U.S. tax legislation (figure 36).

International Developments

Political developments and signs of moderating growth weighed on advanced foreign economy asset prices

Since February, political developments in Europe and moderation in economic growth outside of the United States weighed on some risky asset prices in advanced foreign economies (AFEs). Interest rates on sovereign bonds in several countries in the European periphery rose notably relative to core countries, and European bank shares came under pressure, as investors focused on the formation of the Italian government. Nonetheless, peripheral bond spreads remained well below their levels at the height of the euro-area crisis, and the moves partly retraced as a government was put in place. Broad stock price indexes were little changed on net (figure 37). In contrast to the United States, long-term sovereign yields and market-implied paths of policy rates in the core euro area as well as the United Kingdom declined somewhat, and rates were little changed in Japan (figure 38).

Heightened investor focus on vulnerabilities in emerging market economies led asset prices to come under pressure

Investor concerns about financial vulnerabilities in several emerging market economies (EMEs) intensified this spring against the backdrop of rising U.S. interest rates. Broad measures of EME sovereign bond spreads over U.S. Treasury yields widened notably, and benchmark EME equity indexes declined, as investors scrutinized macroeconomic policy approaches in several countries. Turkey and Argentina, which faced persistently high inflation, expansionary fiscal policies, and large current account deficits, were among the worst performers. Trade policy developments between the United States and its trading partners also weighed on EME asset prices, especially on stock prices in China and some emerging Asian countries. EME mutual funds saw net outflows in May and June after generally solid inflows earlier in the year (figure 39). While movements in asset prices and capital flows were notable for a number of economies, broad indicators of financial stress in EMEs remained low relative to levels seen during other periods of stress in recent years.

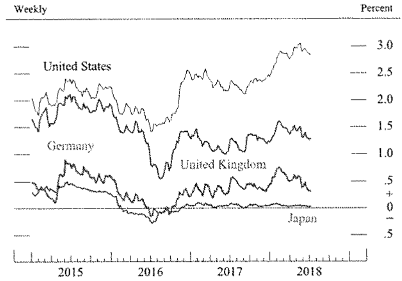
The dollar appreciated

After depreciating during 2017, the broad exchange value of the U.S. dollar has appreciated moderately in recent months (figure 40). Factors contributing to the appreciation of the dollar likely include moderating growth in some foreign economies combined with continued output strength and ongoing policy tightening in the United States, downside risks stemming from political developments in Europe and several EMEs, and the recent developments in trade policy. Several currencies appeared particularly sensitive to trade policy developments, including the Canadian dollar and the Mexican peso, related to the North American Free Trade Agreement negotiations, as well as the Chinese renminbi, which fell notably against the dollar in June.

The pace of economic activity moderated in the AFEs

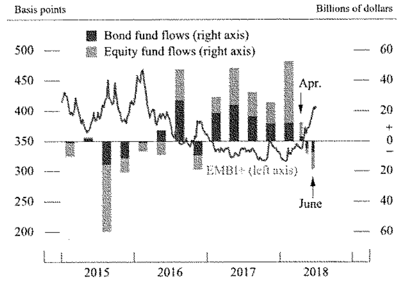
In the first quarter, real GDP growth decelerated in all major AFEs and turned negative in Japan, down from robust rates of activity in 2017 (figure 41). Part of this slowing is a result of temporary factors, though,

38. Nominal 10-year government bond yields in selected advanced economies



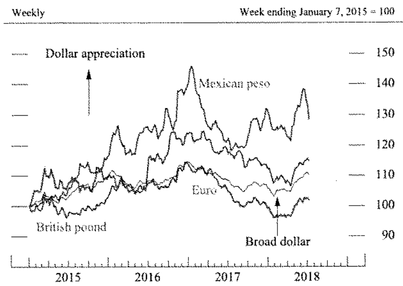
NOTE: The data are weekly averages of daily benchmark yields and extend through July 11, 2018.
SOURCE: Bloomberg.

39. Emerging market mutual fund flows and spreads



NOTE: The bond and equity fund flow data are quarterly sums of weekly data from January 1, 2015, to March 31, 2018, and monthly sums of weekly data from April 1, 2018, to June 30, 2018. The fund flows data exclude funds located in China. The J.P. Morgan Emerging Markets Bond Index Plus (EMBI+) data are weekly averages of daily data and extend through July 4, 2018.
SOURCE: For bond and equity fund flows, EPFR Global; for EMBI+, J.P. Morgan Emerging Markets Bond Index Plus via Bloomberg.

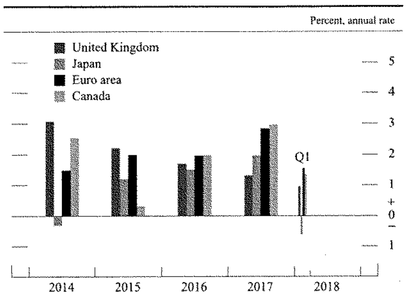
40. U.S. dollar exchange rate indexes



NOTE: The data, which are in foreign currency units per dollar, are weekly averages of daily data and extend through July 11, 2018. As indicated by the arrow, increases in the data represent U.S. dollar appreciation, and decreases represent U.S. dollar depreciation.

SOURCE: Federal Reserve Board, Statistical Release H.10, "Foreign Exchange Rates."

41. Real gross domestic product growth in selected advanced foreign economies



SOURCE: For the United Kingdom, Office for National Statistics; for Japan, Cabinet Office, Government of Japan; for the euro area, Eurostat; for Canada, Statistics Canada; all via Haver Analytics.

including unusually cold weather in Japan and the United Kingdom, labor strikes in the euro area, and disruptions in oil production in Canada. In most AFEs, economic indicators for the second quarter, including purchasing manager surveys and exports, are generally consistent with solid economic growth.

Despite tight labor markets, inflation pressures remain subdued in most AFEs . . .

Sustained increases in oil prices provided upward pressure on consumer price inflation across all AFEs in the first half of the year (figure 42). However, core inflation has generally remained muted in most AFEs, despite further improvement in labor market conditions. In Canada, in contrast, core inflation picked up amid solid wage growth, pushing the total inflation rate above the central bank target.

. . . prompting central banks to maintain highly accommodative monetary policies

With underlying inflation still subdued, the Bank of Japan and the European Central Bank (ECB) kept their policy rates at historically low levels, although the ECB indicated it would again reduce the pace of its asset purchases starting in October. The Bank of England and the Bank of Canada, which both began raising interest rates last year, signaled that further rate increases will be gradual, given a moderation in the pace of economic activity.

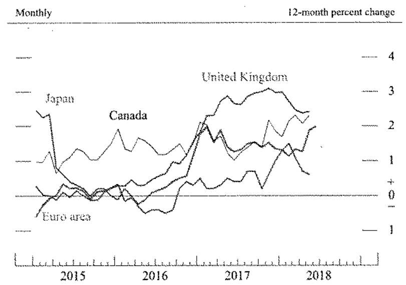
In emerging Asia, growth remained solid . . .

Economic growth in China remained solid in the first quarter of 2018, as a rebound in steel production and strong external demand bolstered a recovery in industrial activity and overall growth (figure 43). Indicators of investment and retail sales have slowed in recent months, however, suggesting that the authorities' effort to rein in credit may have softened domestic demand. Most other emerging Asian economies registered strong growth in the first quarter of 2018, partly reflecting solid external demand.

. . . while growth in some Latin American economies was mixed

In Mexico, real GDP surged in the first quarter as economic activity rebounded from two major earthquakes and a hurricane last year. Following a brief recovery in the first half of 2017, Brazil's economy stalled in the fourth quarter and grew tepidly in the first quarter, and a truckers' strike paralyzed economic activity in late May.

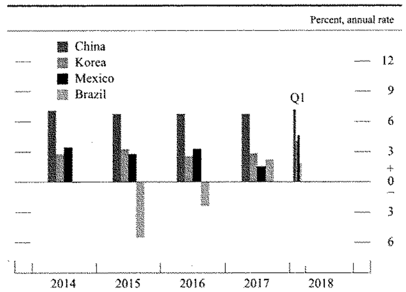
42. Consumer price inflation in selected advanced foreign economies



NOTE: The data for the euro area incorporate the flash estimate for June 2018. The data for Canada, Japan, and the United Kingdom extend through May 2018.

SOURCE: For the United Kingdom, Office for National Statistics; for Japan, Ministry of International Affairs and Communications; for the euro area, Statistical Office of the European Communities; for Canada, Statistics Canada; all via Haver Analytics.

43. Real gross domestic product growth in selected emerging market economies



NOTE: The data for China are seasonally adjusted by Board staff. The data for Korea, Mexico, and Brazil are seasonally adjusted by their respective government agencies.

SOURCE: For China, China National Bureau of Statistics; for Korea, Bank of Korea; for Mexico, Instituto Nacional de Estadistica y Geografia; for Brazil, Instituto Brasileiro de Geografia e Estatistica; all via Haver Analytics.

Part 2
Monetary Policy

The Federal Open Market Committee continued to gradually increase the federal funds target range in the first half of the year . . .

Since December 2015, the Federal Open Market Committee (FOMC) has been gradually increasing its target range for the federal funds rate as the economy has continued to make progress toward the Committee's congressionally mandated objectives of maximum employment and price stability. In the first half of this year, the Committee continued this gradual process of scaling back monetary policy accommodation, increasing its target range for the federal funds rate ¼ percentage point at its meetings in both March and June. With these increases, the federal funds rate is currently in the range of 1¾ to 2 percent (figure 44).[14] The Committee's decisions reflected the continued strengthening of the labor market and the accumulating evidence that, after many years of running below the Committee's 2 percent longer-run objective, inflation had moved close to 2 percent.

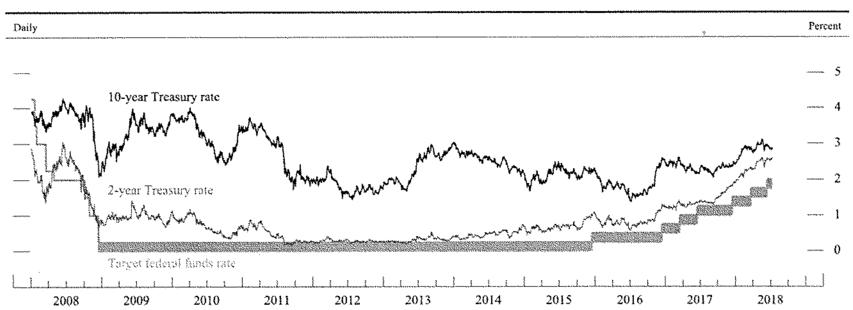
14. See Board of Governors of the Federal Reserve System (2018), "Federal Reserve Issues FOMC Statement," press release, March 21, https://www.federalreserve.gov/newsevents/pressreleases/monetary20180321a.htm; and Board of Governors of the Federal Reserve System (2018), "Federal Reserve Issues FOMC Statement," press release, June 13, https://www.federalreserve.gov/newsevents/pressreleases/monetary20180613a.htm.

. . . but monetary policy continues to support economic growth

Even after the gradual increases in the federal funds rate over the first half of the year, the Committee judges that the stance of monetary policy remains accommodative, thereby supporting strong labor market conditions and a sustained return to 2 percent inflation. In particular, the federal funds rate remains somewhat below most FOMC participants' estimates of its longer-run value.

The Committee expects that a gradual approach to increasing the target range for the federal funds rate will be consistent with a sustained expansion of economic activity, strong labor market conditions, and inflation near the Committee's symmetric 2 percent objective over the medium term. Consistent with this outlook, in the most recent Summary of Economic Projections (SEP), which was compiled at the time of the June FOMC meeting, the median of participants'

44. Selected interest rates



assessments for the appropriate level of the target range for the federal funds rate at year-end rises gradually over the period from 2018 to 2020 and stands somewhat above the median projection for its longer-run level by the end of 2019 and through 2020.[15]

Future changes in the federal funds rate will depend on the economic outlook as informed by incoming data

The FOMC has continued to emphasize that, in determining the timing and size of future adjustments to the target range for the federal funds rate, it will assess realized and expected economic conditions relative to its maximum-employment objective and its symmetric 2 percent inflation objective. This assessment will take into account a wide range of information, including measures of labor market conditions, indicators of inflation pressures and inflation expectations, and readings on financial and international developments.

In evaluating the stance of monetary policy, policymakers routinely consult prescriptions from a variety of policy rules, which can serve as useful benchmarks. However, the use and interpretation of such prescriptions require, among other considerations, careful judgments about the choice and measurement of the inputs to these rules such as estimates of the neutral interest rate, which are highly uncertain (see the box "Complexities of Monetary Policy Rules").

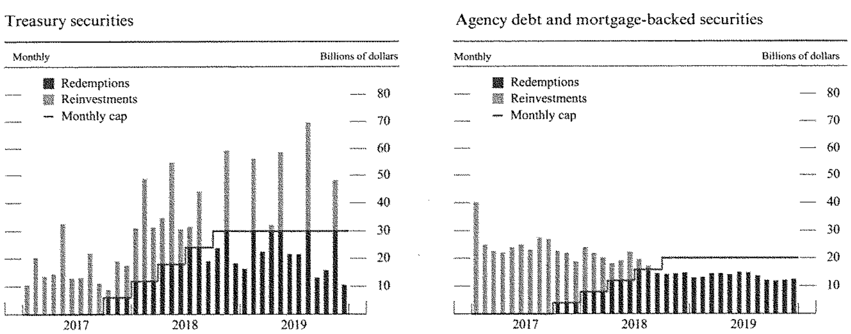
The FOMC has continued to implement its program to gradually reduce the Federal Reserve's balance sheet

The Committee has continued to implement the balance sheet normalization program described in the June 2017 Addendum to the Policy Normalization Principles and Plans.[16] This program is gradually and predictably reducing the Federal Reserve's securities holdings by decreasing the reinvestment of the principal payments it receives from securities held in the System Open Market Account. Since the initiation of the balance sheet normalization program in October of last year, such payments have been reinvested to the extent that they exceeded gradually rising caps (figure 45).

15. See the June SEP, which appeared as an addendum to the minutes of the June 12–13, 2018, meeting of the FOMC and is presented in Part 3 of this report.

16. The addendum, adopted on June 13, 2017, is available at https://www.federalreserve.gov/monetarypolicy/files/FOMC_PolicyNormalization.20170613.pdf.

45. Principal payments on SOMA securities



NOTE: Reinvestment and redemption amounts of agency mortgage-backed securities are projections starting in June 2018. The data extend through December 2019.
SOURCE: Federal Reserve Bank of New York; Federal Reserve Board staff calculations.

Complexities of Monetary Policy Rules

Overview

Monetary policy rules are mathematical formulas that relate a policy interest rate, such as the federal funds rate, to a small number of other economic variables—typically including the deviation of inflation from its target value along with an estimate of resource slack in the economy. Policy rules can provide helpful guidance for policymakers. Indeed, since 2004, prescriptions from policy rules have been included in written materials that are routinely sent to the Federal Open Market Committee (FOMC). However, interpretation of the prescriptions of policy rules requires careful judgment about the measurement of the inputs to the rules and the implications of the many considerations that the rules do not take into account.

Policy rules can incorporate key principles of good monetary policy.[1] One key principle is that monetary policy should respond in a predictable way to changes in economic conditions. A second key principle is that monetary policy should be accommodative when inflation is below the desired level and employment is below its maximum sustainable level; conversely, monetary policy should be restrictive when the opposite holds. A third key principle is that, to stabilize inflation, the policy rate should be adjusted by more than one-for-one in response to persistent increases or decreases in inflation.

Economists have analyzed many monetary policy rules, including the well-known Taylor (1993) rule. Other rules include the "balanced approach" rule, the "adjusted Taylor (1993)" rule, the "price level" rule, and the "first difference" rule (figure A).[2] These policy rules reflect the three key principles of good monetary policy noted earlier. Each rule takes into account estimates of how far the economy is from achieving the Federal Reserve's dual-mandate goals of maximum employment and price stability.

Four of the five rules include the difference between the rate of unemployment that is sustainable in the longer run and the current unemployment rate (the unemployment rate gap); the first-difference rule includes the change in the unemployment gap rather than its level.[3] In addition, four of the five rules include the difference between recent inflation and the FOMC's longer-run objective (2 percent as measured by the annual change in the price index for personal consumption expenditures, or PCE), while the price-level rule includes the gap between the level of prices today and the level of prices that would be observed if inflation had been constant at 2 percent from a specified starting year ($PLgap_t$).[4] The price-level rule thereby takes account of the deviation of inflation from

(continued on next page)

1. For discussion regarding principles for the conduct of monetary policy and monetary policy rules, see Board of Governors of the Federal Reserve System (2018), "Monetary Policy Principles and Practice," Board of Governors, https://www.federalreserve.gov/monetarypolicy/monetary-policy-principles-and-practice.htm.

2. The Taylor (1993) rule was suggested in John B. Taylor (1993), "Discretion versus Policy Rules in Practice," *Carnegie-Rochester Conference Series on Public Policy*, vol. 39 (December), pp. 195–214. The balanced-approach rule was analyzed in John B. Taylor (1999), "A Historical Analysis of Monetary Policy Rules," in John B. Taylor, ed., *Monetary Policy Rules* (Chicago: University of Chicago Press), pp. 319–41. The adjusted Taylor (1993) rule was studied in David Reifschneider and John C. Williams (2000), "Three Lessons for Monetary Policy in a Low-Inflation Era," *Journal of Money, Credit and Banking*, vol. 32 (November), pp. 936–66. A price-level rule was discussed in Robert E. Hall (1984), "Monetary Strategy with an Elastic Price Standard," in *Price Stability and Public Policy*, proceedings of a symposium sponsored by the Federal Reserve Bank of Kansas City, held in Jackson Hole, Wyo., August 2–3 (Kansas City: Federal Reserve Bank of Kansas City), pp. 137–59, https://www.kansascityfed.org/publicat/sympos/1984/s84.pdf. Finally, the first-difference rule was introduced by Athanasios Orphanides (2003), "Historical Monetary Policy Analysis and the Taylor Rule," *Journal of Monetary Economics*, vol. 50 (July), pp. 983–1022. A comprehensive review of policy rules is in John B. Taylor and John C. Williams (2011), "Simple and Robust Rules for Monetary Policy," in Benjamin M. Friedman and Michael Woodford, eds., *Handbook of Monetary Economics*, vol. 3B (Amsterdam: North-Holland), pp. 829–59. The same volume of the *Handbook of Monetary Economics* also discusses approaches other than policy rules for deriving policy rate prescriptions.

3. The Taylor (1993) rule represented slack in resource utilization using an output gap (the difference between the current level of real gross domestic product (GDP) and what GDP would be if the economy was operating at maximum employment). The rules in figure A represent slack in resource utilization using the unemployment gap instead, because that gap better captures the FOMC's statutory goal to promote maximum employment. Movements in these alternative measures of resource utilization are highly correlated. For more information, see the note below figure A.

4. Calculating the prescriptions of the price-level rule requires selecting a starting year for the price level from which to cumulate the 2 percent annual inflation. Figure B uses 1998 as the starting year. Around that time, the underlying trend of inflation and longer-term inflation expectations stabilized at a level consistent with PCE price inflation being close to 2 percent.

Monetary Policy Rules *(continued)*

A. Monetary policy rules

Taylor (1993) rule	$R_t^{T93} = r_t^{LR} + \pi_t + 0.5(\pi_t - \pi^{LR}) + (u_t^{LR} - u_t)$
Balanced-approach rule	$R_t^{BA} = r_t^{LR} + \pi_t + 0.5(\pi_t - \pi^{LR}) + 2(u_t^{LR} - u_t)$
Taylor (1993) rule, adjusted	$R_t^{T93adj} = maximum\ \{R_t^{T93} - Z_t, 0\}$
Price-level rule	$R_t^{PL} = maximum\ \{r_t^{LR} + \pi_t + (u_t^{LR} - u_t) + 0.5(PLgap_t), 0\}$
First-difference rule	$R_t^{FD} = R_{t-1} + 0.5(\pi_t - \pi^{LR}) + (u_t^{LR} - u_t) - (u_{t-4}^{LR} - u_{t-4})$

NOTE: R_t^{T93}, R_t^{BA}, R_t^{T93adj}, R_t^{PL}, and R_t^{FD} represent the values of the nominal federal funds rate prescribed by the Taylor (1993), balanced-approach, adjusted Taylor (1993), price-level, and first-difference rules, respectively.

R_t denotes the actual nominal federal funds rate for quarter t, π_t is four-quarter price inflation for quarter t, u_t is the unemployment rate in quarter t, and r_t^{LR} is the level of the neutral real federal funds rate in the longer run that, on average, is expected to be consistent with sustaining maximum employment and inflation at the FOMC's 2 percent longer-run objective, π^{LR}. In addition, u_t^{LR} is the rate of unemployment in the longer run. Z_t is the cumulative sum of past deviations of the federal funds rate from the prescriptions of the Taylor (1993) rule when that rule prescribes setting the federal funds rate below zero. $PLgap_t$ is the percent deviation of the actual level of prices from a price level that rises 2 percent per year from its level in a specified starting period.

The Taylor (1993) rule and other policy rules are generally written in terms of the deviation of real output from its full capacity level. In these equations, the output gap has been replaced with the gap between the rate of unemployment in the longer run and its actual level (using a relationship known as Okun's law) in order to represent the rules in terms of the FOMC's statutory goals. Historically, movements in the output and unemployment gaps have been highly correlated. Box note 2 provides references for the policy rules.

the long-run objective in earlier periods as well as the current period. Thus, if inflation had been running persistently above 2 percent, the price-level rule would prescribe a higher level for the federal funds rate than rules that use the current inflation gap. Likewise, if inflation had been running persistently below 2 percent, the price-level rule would prescribe setting the policy rate lower than rules that use the current inflation gap.

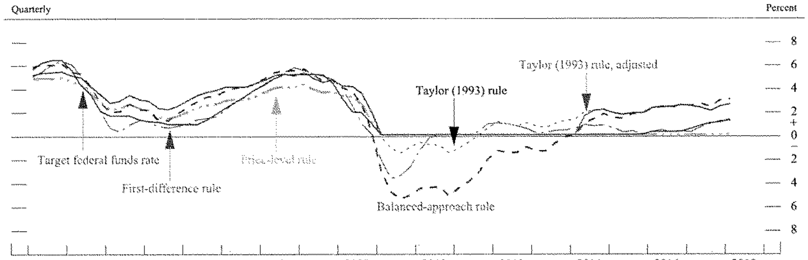
The adjusted Taylor (1993) rule recognizes that the federal funds rate cannot be reduced materially below zero, and that following the prescriptions of the standard Taylor (1993) rule after a recession during which interest rates have fallen to their lower bound may, for a time, not provide enough policy accommodation. To make up for the cumulative shortfall in accommodation (Z_t), the adjusted rule prescribes only a gradual return of the policy rate to the (positive) levels prescribed by the standard Taylor (1993) rule after the economy begins to recover. The particular price-level rule specified in figure A also recognizes that the federal funds rate cannot be reduced materially below zero. If inflation runs below the 2 percent objective during periods when the rule prescribes setting the federal funds rate well below zero, the price-level rule will, over time, provide accommodation to make up for the past inflation shortfall.

The U.S. economy is complex, and the monetary policy rules shown in figure A do not capture many elements that are relevant to the conduct of monetary policy. Moreover, as shown in figure B, different monetary policy rules often offer quite different prescriptions for the federal funds rate.[5] In practice, there is no unique criterion for favoring one rule over another. In recent years, almost all of the policy rules

(continued)

5. These prescriptions are calculated using (1) published data for inflation and the unemployment rate and (2) survey-based estimates of the longer-run value of the neutral real interest rate and the longer-run value of the unemployment rate.

B. Historical federal funds rate prescriptions from simple policy rules



NOTE: The rules use historical values of inflation, the federal funds rate, and the unemployment rate. Inflation is measured as the 4-quarter percent change in the price index for personal consumption expenditures (PCE) excluding food and energy. Quarterly projections of long-run values for the federal funds rate and the unemployment rate are derived through interpolations of biannual projections from Blue Chip Economic Indicators. The long-run value for inflation is taken as 2 percent. The target value of the price level is the average level of the price index for PCE excluding food and energy in 1998 extrapolated at 2 percent per year.

SOURCE: Federal Reserve Bank of Philadelphia; Wolters Kluwer, Blue Chip Economic Indicators; Federal Reserve Board staff estimates.

shown have called for rising values of the federal funds rate, but the pace of tightening that the rules prescribe has varied widely.

Uncertainty about the neutral interest rate in the longer run

The Taylor (1993), balanced-approach, adjusted Taylor (1993), and price-level rules provide prescriptions for the *level* of the federal funds rate; all require an estimate of the neutral real interest rate in the longer run (r_t^{LR})—that is, the level of the real federal funds rate that is expected to be consistent, in the longer run, with maximum employment and stable inflation.[6] The neutral real interest rate in the longer run is determined by structural features of the economy and is not observable. In addition, its value may vary over time because of fluctuations in trend productivity growth, changing demographics, and other shifts in the structure of the economy. As a result, estimates of the neutral real interest rate in the longer run made today may differ substantially from estimates made later.

Academic studies have estimated the longer-run value of the neutral real interest rate using statistical techniques to capture the variations among inflation, interest rates, real gross domestic product, unemployment, and other data series. The range of estimates is wide but suggests that the neutral real rate has declined since the turn of the century (figure C).[7] There is substantial statistical uncertainty surrounding each estimate of the longer-run value of the neutral real rate, as evidenced by the width of the 95 percent

(continued on next page)

6. The first-difference rule shown in figure A does not require an estimate of the neutral real interest rate in the longer run. However, this rule has its own shortcomings. For example, research suggests that this sort of rule will result in greater volatility in employment and inflation relative to what would be obtained under the Taylor (1993) and balanced-approach rules unless the estimates of the neutral real federal funds rate in the longer run and the rate of unemployment in the longer run that are included in those rules are sufficiently far from their true values.

7. The range of estimates is computed using published values or values computed using the methodology from the following studies: Marco Del Negro, Domenico Giannone, Marc P. Giannoni, and Andrea Tambalotti (2017), "Safety, Liquidity, and the Natural Rate of Interest," *Brookings Papers on Economic Activity*, Spring, pp. 235–94, https://www.brookings.edu/wp-content/uploads/2017/08/delnegrotextsp17bpea.pdf; Kathryn Holston, Thomas Laubach, and John C. Williams (2017), "Measuring the Natural Rate of Interest: International Trends and Determinants," *Journal of International Economics*, supp. 1, vol. 108 (May), pp. S59–75; Benjamin K. Johannsen and Elmar Mertens (2016), "The Expected Real Interest Rate in the Long Run: Time Series Evidence with the Effective Lower Bound," FEDS Notes (Washington: Board of Governors

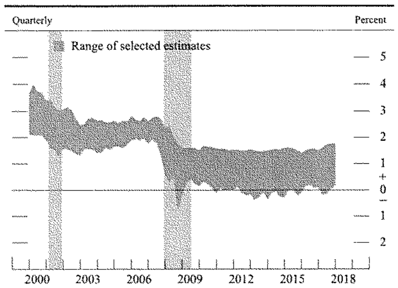
Monetary Policy Rules *(continued)*

uncertainty bands for the estimated values in the first quarter of 2018 (figure D).

The longer-run normal level of the federal funds rate under appropriate monetary policy—equal to the sum of the neutral real interest rate in the longer run and the FOMC's 2 percent inflation objective—is one benchmark for evaluating the current stance of monetary policy. Uncertainty about the longer-run value of the neutral real interest rate leads to uncertainty about how far the current federal funds rate is from its longer-run normal level. For the Taylor (1993), balanced-approach, adjusted Taylor (1993), and price-level rules, different estimates of the neutral real interest rate in the longer run translate one-for-one to differences in the prescribed setting of the federal funds rate. As a result, the substantial statistical uncertainty accompanying estimates of the neutral rate in the longer run implies substantial uncertainty surrounding the prescriptions of each policy rule. Following the prescriptions of a policy rule with an incorrect value of the neutral rate could lead to poor economic outcomes.

If the longer-run value of the neutral real interest rate is currently at the low end of the range of estimates,

C. Range of selected estimates for the neutral real federal funds rate in the longer run



NOTE: The shaded bars indicate periods of business recession as defined by the National Bureau of Economic Research.

SOURCE: Federal Reserve Board staff calculations, along with references listed in box note 7.

then monetary policy is more likely to be constrained by the lower bound on nominal interest rates in the future. Historically, the FOMC has cut the federal funds rate by 5 percentage points, on average, during downturns in the economy. Cutting the federal funds rate by this much in response to a future economic downturn may not be feasible if the neutral federal funds rate is as low as most of the estimates suggest.

(continued)

of the Federal Reserve System, February 9), https://www.federalreserve.gov/econresdata/notes/feds-notes/2016/the-expected-real-interest-rate-in-the-long-run-time-series-evidence-with-the-effective-lower-bound-20160209.html; Michael T. Kiley (2015), "What Can the Data Tell Us about the Equilibrium Real Interest Rate?" Finance and Economics Discussion Series 2015-77 (Washington: Board of Governors of the Federal Reserve System, September), http://dx.doi.org/10.17016/FEDS.2015.077; Thomas Laubach and John C. Williams (2015), "Measuring the Natural Rate of Interest Redux," Hutchins Center Working Paper 15 (Washington: Brookings Institution, November), https://www.brookings.edu/wp-content/uploads/2016/07/WP15-Laubach-Williams-natural-interest-rate-redux.pdf; Kurt F. Lewis and Francisco Vazquez-Grande (2017), "Measuring the Natural Rate of Interest: Alternative Specifications," Finance and Economics Discussion Series 2017-059 (Washington: Board of Governors of the Federal Reserve System, June), https://doi.org/10.17016/FEDS.2017.059; Thomas A. Lubik and Christian Matthes (2015), "Calculating the Natural Rate of Interest: A Comparison of Two Alternative Approaches," Economic Brief 15-10 (Richmond, Va.: Federal Reserve Bank of Richmond, October), https://www.richmondfed.org/-/media/richmondfedorg/publications/research/economic_brief/2015/pdf/eb_15-10.pdf.

D. Point estimates and uncertainty bands for neutral real rate in the longer run as of 2018:Q1

Study	Point estimate	95 percent uncertainty band
Del Negro and others (2017)	1.3	(.7, 2.1)
Holston and others (2017)	.6	(-2.5, 3.7)
Johannsen and Mertens (2016)	.7	(-1.3, 2.5)
Kiley (2015)	.4	(-.6, 1.6)
Laubach and Williams (2015)	.1	(-5.4, 5.6)
Lewis and Vazquez-Grande (2017)	1.8	(.5, 3.1)
Lubik and Matthes (2015)	1.0	(-2.3, 4.5)

SOURCE: Federal Reserve Board staff calculations, along with references listed in box note 7.

As a result, it may not be feasible to provide the levels of accommodation prescribed by many policy rules, potentially leading to elevated unemployment and inflation averaging below the Committee's 2 percent objective.[8] Rules that try to offset the cumulative shortfall of accommodation posed by the lower bound on nominal interest rates, such as the adjusted Taylor (1993) rule, or make up the cumulative shortfall in the level of prices, such as the price-level rule, are intended to mitigate the effects of the lower bound on the economy by providing more accommodation than prescribed by rules that do not have these makeup features.[9]

In the years following the financial crisis, with the federal funds rate close to zero, the FOMC recognized that it would have limited scope to respond to an unexpected weakening in the economy by lowering short-term interest rates. This risk has, in recent years, provided a sound rationale for following a more gradual path of rate increases than that prescribed by some policy rules. In these circumstances, increasing the policy rate quickly in order to have room to cut rates during an economic downturn could be counterproductive because it might make a downturn more likely to happen.

8. For further discussion of these issues, see Michael T. Kiley and John M. Roberts (2017), "Monetary Policy in a Low Interest Rate World," *Brookings Papers on Economic Activity,* Spring, pp. 317–72, https://www.brookings.edu/wp-content/uploads/2017/08/kileytextsp17bpea.pdf.

9. Economists have found that a "makeup" policy can be the best response in theory when the policy interest rate is constrained at zero. See Ben S. Bernanke (2017), "Monetary Policy in a New Era," paper presented at "Rethinking Macroeconomic Policy," a conference held at the Peterson Institute for International Economics, Washington, October 12–13, https://piie.com/system/files/documents/bernanke20171012paper.pdf; and Michael Woodford (1999), "Commentary: How Should Monetary Policy Be Conducted in an Era of Price Stability?" in *New Challenges for Monetary Policy*, proceedings of a symposium sponsored by the Federal Reserve Bank of Kansas City (Kansas City, Mo.: Federal Reserve Bank of Kansas City) pp. 277–316, https://www.kansascityfed.org/publications/research/escp/symposiums/escp-1999.

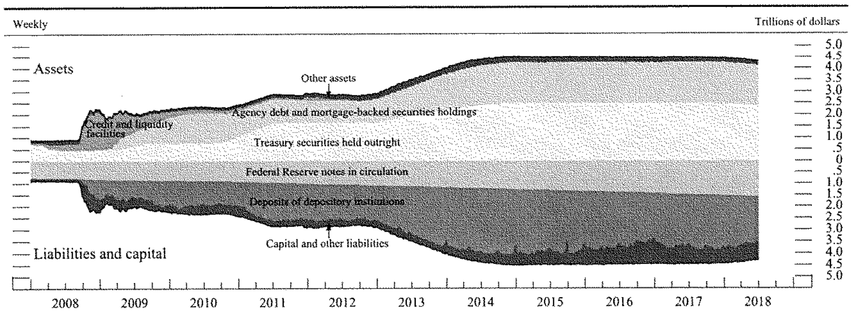
In the first quarter, the Open Market Desk at the Federal Reserve Bank of New York, as directed by the Committee, reinvested principal payments from the Federal Reserve's holdings of Treasury securities maturing during each calendar month in excess of $12 billion. The Desk also reinvested in agency mortgage-backed securities (MBS) the amount of principal payments from the Federal Reserve's holdings of agency debt and agency MBS received during each calendar month in excess of $8 billion. Over the second quarter, payments of principal from maturing Treasury securities and from the Federal Reserve's holdings of agency debt and agency MBS were reinvested to the extent that they exceeded $18 billion and $12 billion, respectively. At its meeting in June, the FOMC increased the cap for Treasury securities to $24 billion and the cap for agency debt and agency MBS to $16 billion, both effective in July. The Committee has indicated that the caps for Treasury securities and for agency securities will increase to $30 billion and $20 billion per month, respectively, in October. These terminal caps will remain in place until the Committee judges that the Federal Reserve is holding no more securities than necessary to implement monetary policy efficiently and effectively.

The implementation of the program has proceeded smoothly without causing disruptive price movements in Treasury and MBS markets. As the caps have increased gradually and predictably, the Federal Reserve's total assets have started to decrease, from about $4.4 trillion last October to about $4.3 trillion at present, with holdings of Treasury securities at approximately $2.4 trillion and holdings of agency and agency MBS at approximately $1.7 trillion (figure 46).

The Federal Reserve's implementation of monetary policy has continued smoothly

To implement the FOMC's decisions to raise the target range for the federal funds rate in March and June of 2018, the Federal Reserve increased the rate of interest on excess reserves (IOER) along with the interest rate offered on overnight reverse repurchase agreements (ON RRPs). Specifically, the Federal Reserve increased the IOER rate to 1¾ percent and the ON RRP offering rate to 1½ percent in March. In June, the Federal Reserve increased the IOER rate to 1.95 percent—5 basis points below the top of the target range—and the ON RRP offering rate to 1¾ percent. In addition, the Board of Governors approved

46. Federal Reserve assets and liabilities



Note: "Credit and liquidity facilities" consists of primary, secondary, and seasonal credit; term auction credit; central bank liquidity swaps; support for Maiden Lane, Bear Stearns, and AIG; and other credit facilities, including the Primary Dealer Credit Facility, the Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility, the Commercial Paper Funding Facility, and the Term Asset-Backed Securities Loan Facility. "Other assets" includes unamortized premiums and discounts on securities held outright. "Capital and other liabilities" includes reverse repurchase agreements, the U.S. Treasury General Account, and the U.S. Treasury Supplementary Financing Account. The data extend through July 4, 2018.

Source: Federal Reserve Board, Statistical Release H.4.1, "Factors Affecting Reserve Balances."

a ¼ percentage point increase in the discount rate (the primary credit rate) in both March and June. Yields on a broad set of money market instruments moved higher, roughly in line with the federal funds rate, in response to the FOMC's policy decisions in March and June. Usage of the ON RRP facility has declined, on net, since the turn of the year, reflecting relatively attractive yields on alternative investments.

The effective federal funds rate moved up toward the IOER rate in the months before the June FOMC meeting and, therefore, was trading near the top of the target range. At its June meeting, the Committee made a small technical adjustment in its approach to implementing monetary policy by setting the IOER rate modestly below the top of the target range for the federal funds rate. This adjustment resulted in the effective federal funds rate running closer to the middle of the target range since mid-June. In an environment of large reserve balances, the IOER rate has been an essential policy tool for keeping the federal funds rate within the target range set by the FOMC (see the box "Interest on Reserves and Its Importance for Monetary Policy").

Interest on Reserves and Its Importance for Monetary Policy

The financial crisis that began in 2007 triggered the deepest recession in the United States since the Great Depression. In response, the Federal Open Market Committee (FOMC) cut its target for the federal funds rate to nearly zero by late 2008. Other short-term interest rates declined roughly in line with the federal funds rate. Additional monetary stimulus was necessary to address the significant economic downturn and the associated downward pressure on inflation. The FOMC undertook other monetary policy actions to put downward pressure on longer-term interest rates, including large-scale purchases of longer-term Treasury securities and agency-guaranteed mortgage-backed securities.

These policy actions made financial conditions more accommodative and helped spur an economic recovery that has become a long-lasting economic expansion. The unemployment rate has declined from 10 percent to less than 4 percent over the course of the recovery and expansion, and inflation has been low and fairly stable. The FOMC's actions were critical to fostering progress toward maximum employment and stable prices—the statutory goals for the conduct of monetary policy established by the Congress.

The Federal Reserve's large-scale asset purchases had the side effect of generating a sizable increase in the supply of reserve balances, which are the balances that banks maintain in their accounts at the Federal Reserve.[1] From the onset of the financial crisis in August 2007 until October 2014, when the FOMC ended the last of its asset purchase programs, the supply of reserve balances rose from about $15 billion to about $2½ trillion.[2] Reserve balances rose well above the level necessary to meet reserve requirements, thus swelling the quantity of excess reserves held by the banking system.

As the economic expansion continued and unemployment declined—and with labor market conditions projected to continue improving—the FOMC decided that it would scale back policy support by increasing the level of short-term interest rates and by reducing the Federal Reserve's securities holdings. To that end, the Committee began gradually raising its target range for the federal funds rate in December 2015. Later, in October 2017, it began gradually reducing holdings of Treasury and agency securities; this gradual reduction results in a decline in the supply of reserve balances. The FOMC judged that removing monetary policy stimulus through this mix of first raising the federal funds rate and then beginning to shrink the balance sheet would best contribute to achieving and maintaining maximum employment and price stability without causing dislocations in financial markets or institutions that could put the economic expansion at risk.

Interest on reserves—the payment of interest on balances held by banks in their accounts at the Federal Reserve—has been an essential policy tool that has permitted the FOMC to achieve a gradual increase in the federal funds rate in combination with a gradual reduction in the Fed's securities holdings and in the supply of reserve balances.[3] Interest on reserves is a monetary policy tool used by all of the world's major central banks.

Interest on reserves is the principal tool the FOMC uses to anchor the federal funds rate in the target range. The federal funds rate, in turn, establishes an important benchmark for the borrowing and lending decisions in the banking sector (figure A). When the Federal Reserve increases the target range for the federal funds rate and the interest rate it pays on reserve balances, banks bid up the rates in short-term funding markets to levels consistent with those increases; rates in other short-term funding markets—such as commercial paper rates, Treasury bill rates, and rates on repurchase

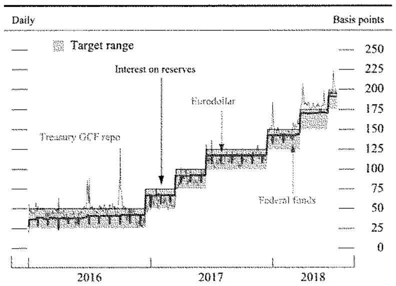
(continued)

1. All depository institutions (commercial banks, savings banks, thrift institutions, credit unions, and most U.S. branches and agencies of foreign banks) that maintain reserve balances are eligible to earn interest on those balances. We refer to these institutions as "banks."

2. For a detailed discussion of how the changes in Federal Reserve securities holdings affect the Federal Reserve's balance sheet and sectors of the U.S. economy, see Jane Ihrig, Lawrence Mize, and Gretchen C. Weinbach (2017), "How Does the Fed Adjust Its Securities Holdings and Who Is Affected?" Finance and Economics Discussion Series 2017-099 (Washington: Board of Governors of the Federal Reserve System, September), https://www.federalreserve.gov/econres/feds/files/2017099pap.pdf.

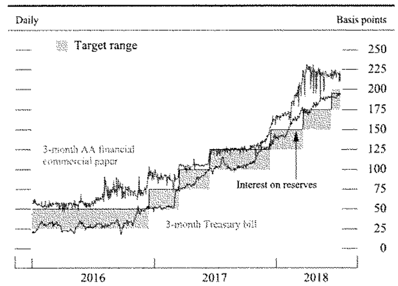
3. The Financial Services Regulatory Relief Act of 2006 authorized the Federal Reserve Banks to pay interest on balances held by or on behalf of depository institutions at Federal Reserve Banks, subject to regulations of the Board of Governors, effective October 1, 2011. The effective date of this authority was changed to October 1, 2008, by the Emergency Economic Stabilization Act of 2008. The Congress authorized the payment of interest on reserves to help minimize the incentives for costly reserve avoidance schemes and to provide the Federal Reserve with a policy tool that could be useful for monetary policy implementation more broadly.

A. Overnight money market rates



NOTE: The upper bound of the target range is the interest on reserves rate until June 13, 2018, after which it is 5 basis points higher. The federal funds and Eurodollar rates closely track one another over the period shown. GCF is General Collateral Finance.
SOURCE: For Treasury GCF repo, DTCC Solutions LLC, an affiliate of The Depository Trust & Clearing Corporation; for federal funds, Federal Reserve Bank of New York; for Eurodollar, Bloomberg; for interest on reserves and target range, Federal Reserve Board.

B. Term money market rates



NOTE: The upper bound of the target range is the interest on reserves rate until June 13, 2018, after which it is 5 basis points higher.
SOURCE: For U.S. Treasury bill, Department of the Treasury; for AA financial commercial paper, interest on reserves, and target range, Federal Reserve Board.

agreements—all tend to move higher as well (figure B). This increase in the general level of short-term rates, together with the expected future path of short-term rates, then influences the level of other financial asset prices and overall financial conditions in the economy. Thus, changing the interest rate on reserves has proven to be an effective tool for transmitting changes in the FOMC's target range for the federal funds rate to other interest rates in the economy.

The rate of interest the Federal Reserve pays on banks' reserve balances is far lower than the rate that banks can earn on alternative safe assets, including most U.S. government or agency securities, municipal securities, and loans to businesses and consumers.[4] Indeed, the bank prime rate—the base rate that banks use for loans to many of their customers—is currently around 300 basis points above the level of interest on reserves. Banks continue to find lending attractive, and bank lending has been expanding at a solid pace since 2012. Households have begun to see interest rates on retail deposits rising as well. Moreover, the configuration of interest rates implies that the return the Federal Reserve earns on its holdings of securities is higher than the interest it pays on reserve balances. Each year, the Federal Reserve remits its earnings—that is, its income net of expenses—to the Treasury Department; in 2017, remittances totaled more than $80 billion.

Had the Federal Reserve not been able to pay interest on reserve balances at the same time that excess reserves in the banking system were large, it would not have been able to gradually raise the federal funds rate and other short-term interest rates while reserve balances were abundant; the FOMC would have had to take a different approach to scaling back monetary policy accommodation. This approach likely would have involved a rapid and sizable reduction in the Federal Reserve's securities holdings in order to put sufficient upward pressure on interest rates.

(continued on next page)

4. The Congress's authorization allows the Federal Reserve to pay interest on deposits maintained by depository institutions at a rate not to exceed the "general level of short-term interest rates." The Federal Reserve Board's Regulation D defines short-term interest rates for the purposes of this authority as "rates on obligations with maturities of no more than one year, such as the primary credit rate and rates on term federal funds, term repurchase agreements, commercial paper, term Eurodollar deposits, and other similar instruments." The rate of interest on reserves has been well within a range of short-term interest rates as defined in Board regulations. For current rates on a number of short-term money market instruments, see Board of Governors of the Federal Reserve System, Statistical Release H.15, "Selected Interest Rates," www.federalreserve.gov/releases/h15/current.

Interest on Reserves *(continued)*

Getting the pace of asset sales just right for achieving the Federal Reserve's objectives would have been extremely challenging. Such an approach to removing accommodation would have run the risk of disrupting financial markets, with adverse effects on the economy.

Indeed, as observed during the early summer of 2013, market reactions to changes in the outlook for the Federal Reserve's holdings of long-term securities can have outsized effects in bond markets. At that time, FOMC communications that pointed to the eventual cessation of asset purchases seemed to alarm investors and reportedly contributed to a rise in longer-term rates of 150 basis points over just a few months. That rise in rates quickly pushed up the cost of mortgage credit and rates on other forms of borrowing for households and businesses.

Thus, Federal Reserve policymakers judged that the best strategy for adjusting the stance of monetary policy would be gradual increases in the target range for the federal funds rate, supplemented later on by gradual reductions in the Federal Reserve's securities holdings. The ongoing, gradual reduction in the Federal Reserve's securities holdings that the FOMC set in motion in 2017 will bring the level of reserve balances down substantially over the next few years. The size of reserves that banks eventually want to hold will reflect balances held to meet reserve requirements and payments needs as well as balances held to address regulatory and structural changes in the banking system since the financial crisis.[5] Although the level of reserve balances that banks will eventually want to hold is not yet known, that level is likely to be much lower than it is today, though appreciably higher than it was before the crisis.[6] In addition, the amount of U.S. currency—Federal Reserve notes—that people in the United States and elsewhere want to hold has increased substantially since the crisis. If banks want to hold more reserve balances and the public wants to hold more U.S. currency than before the crisis, the Federal Reserve will need to supply the reserves and currency, so the Federal Reserve's securities holdings also will have to be larger than before the financial crisis.[7]

Interest on reserves will remain an important policy tool for keeping the federal funds rate within the target range set by the FOMC and thus managing the level of short-term interest rates, even as the ongoing reduction in the Federal Reserve's securities holdings generates a gradual decline in the amount of reserve balances on which the Federal Reserve pays interest. In June 2018, the Federal Reserve made a small technical adjustment to de-link the rate of interest on reserves from the top of the Committee's target range for the federal funds rate. At the June 2018 FOMC meeting, the Committee increased the federal funds target range by 25 basis points, while the rate of interest on reserve balances was increased by 20 basis points. This change is intended to ensure that the federal funds rate continues to trade well within the Committee's target range. The spread between the effective federal funds rate and the rate of interest on reserves could continue to narrow over time as the Federal Reserve's securities holdings and the supply of reserve balances gradually decline.

5. For a discussion of the changes in the banking system since the financial crisis and their potential effects on the demand for reserve balances, see Randal K. Quarles (2018), "Liquidity Regulation and the Size of the Fed's Balance Sheet," speech delivered at "Currencies, Capital, and Central Bank Balances: A Policy Conference," Hoover Institution, Stanford University, Stanford, Calif., May 4, https://www.federalreserve.gov/newsevents/speech/quarles20180504a.htm.

6. Uncertainty about the eventual level of reserve balances is another reason that the FOMC has been reducing the Federal Reserve's holdings of securities, and the supply of reserve balances, gradually.

7. Currency grows roughly in line with nominal gross domestic product. In December 2008, currency in circulation was around $850 billion, compared with $1.6 trillion at the end of June 2018.

Part 3
Summary of Economic Projections

The following material appeared as an addendum to the minutes of the June 12–13, 2018, meeting of the Federal Open Market Committee.

In conjunction with the Federal Open Market Committee (FOMC) meeting held on June 12–13, 2018, meeting participants submitted their projections of the most likely outcomes for real gross domestic product (GDP) growth, the unemployment rate, and inflation for each year from 2018 to 2020 and over the longer run.[17] Each participant's projections were based on information available at the time of the meeting, together with his or her assessment of appropriate monetary policy—including a path for the federal funds rate and its longer-run value—and assumptions about other factors likely to affect economic outcomes. The longer-run projections represent each participant's assessment of the value to which each variable would be expected to converge, over time, under appropriate monetary policy and in the absence of further shocks to the economy.[18] "Appropriate monetary policy" is defined as the future path of policy that each participant deems most likely to foster outcomes for economic activity and inflation that best satisfy his or her individual interpretation of the statutory mandate to promote maximum employment and price stability.

All participants who submitted longer-run projections expected that, in 2018, real GDP would expand at a pace exceeding their individual estimates of the longer-run growth rate of real GDP. Participants generally saw real GDP growth moderating somewhat in each of the following two years but remaining above their estimates of the longer-run rate.

All participants who submitted longer-run projections expected that, throughout the projection period, the unemployment rate would run below their estimates of its longer-run level. All participants projected that inflation, as measured by the four-quarter percentage change in the price index for personal consumption expenditures (PCE), would run at or slightly above the Committee's 2 percent objective by the end of 2018 and remain roughly flat through 2020. Compared with the Summary of Economic Projections (SEP) from March, most participants slightly marked up their projections of real GDP growth in 2018 and somewhat lowered their projections for the unemployment rate from 2018 through 2020; participants indicated that these revisions reflected, in large part, strength in incoming data. A large majority of participants made slight upward adjustments to their projections of inflation in 2018. Table 1 and figure 1 provide summary statistics for the projections.

As shown in figure 2, participants generally continued to expect that the evolution of the economy relative to their objectives of maximum employment and 2 percent inflation would likely warrant further gradual increases in the federal funds rate. The central tendencies of participants' projections of the federal funds rate for both 2018 and 2019 were roughly unchanged, but the medians for both years were 25 basis points higher relative to March. Nearly all participants who submitted longer-run projections expected that, during part of the projection period, evolving economic conditions would make it appropriate for the federal funds rate to move somewhat above their estimates of its longer-run level.

17. Three members of the Board of Governors were in office at the time of the June 2018 meeting.

18. One participant did not submit longer-run projections for real GDP growth, the unemployment rate, or the federal funds rate.

Table 1. Economic projections of Federal Reserve Board members and Federal Reserve Bank presidents, under their individual assessments of projected appropriate monetary policy, June 2018

Percent

Variable	Median[1]				Central tendency[2]				Range[3]			
	2018	2019	2020	Longer run	2018	2019	2020	Longer run	2018	2019	2020	Longer run
Change in real GDP	2.8	2.4	2.0	1.8	2.7–3.0	2.2–2.6	1.8–2.0	1.8–2.0	2.5–3.0	2.1–2.7	1.5–2.2	1.7–2.1
March projection	2.7	2.4	2.0	1.8	2.6–3.0	2.2–2.6	1.8–2.1	1.8–2.0	2.5–3.0	2.0–2.8	1.5–2.3	1.7–2.2
Unemployment rate	3.6	3.5	3.5	4.5	3.6–3.7	3.4–3.5	3.4–3.7	4.3–4.6	3.5–3.8	3.3–3.8	3.3–4.0	4.1–4.7
March projection	3.8	3.6	3.6	4.5	3.6–3.8	3.4–3.7	3.5–3.8	4.3–4.7	3.6–4.0	3.3–4.2	3.3–4.4	4.2–4.8
PCE inflation	2.1	2.1	2.1	2.0	2.0–2.1	2.0–2.2	2.1–2.2	2.0	2.0–2.2	1.9–2.3	2.0–2.3	2.0
March projection	1.9	2.0	2.1	2.0	1.8–2.0	2.0–2.2	2.1–2.2	2.0	1.8–2.1	1.9–2.3	2.0–2.3	2.0
Core PCE inflation[4]	2.0	2.1	2.1		1.9–2.0	2.0–2.2	2.1–2.2		1.9–2.1	2.0–2.3	2.0–2.3	
March projection	1.9	2.1	2.1		1.8–2.0	2.0–2.2	2.1–2.2		1.8–2.1	1.9–2.3	2.0–2.3	
Memo: Projected appropriate policy path												
Federal funds rate	2.4	3.1	3.4	2.9	2.1–2.4	2.9–3.4	3.1–3.6	2.8–3.0	1.9–2.6	1.9–3.6	1.9–4.1	2.3–3.5
March projection	2.1	2.9	3.4	2.9	2.1–2.4	2.8–3.4	3.1–3.6	2.8–3.0	1.6–2.6	1.6–3.9	1.6–4.9	2.3–3.5

NOTE: Projections of change in real gross domestic product (GDP) and projections for both measures of inflation are percent changes from the fourth quarter of the previous year to the fourth quarter of the year indicated. PCE inflation and core PCE inflation are the percentage rates of change in, respectively, the price index for personal consumption expenditures (PCE) and the price index for PCE excluding food and energy. Projections for the unemployment rate are for the average civilian unemployment rate in the fourth quarter of the year indicated. Each participant's projections are based on his or her assessment of appropriate monetary policy. Longer-run projections represent each participant's assessment of the rate to which each variable would be expected to converge under appropriate monetary policy and in the absence of further shocks to the economy. The projections for the federal funds rate are the value of the midpoint of the projected appropriate target range for the federal funds rate or the projected appropriate target level for the federal funds rate at the end of the specified calendar year or over the longer run. The March projections were made in conjunction with the meeting of the Federal Open Market Committee on March 20–21, 2018. One participant did not submit longer-run projections for the change in real GDP, the unemployment rate, or the federal funds rate in conjunction with the March 20–21, 2018, meeting, and one participant did not submit such projections in conjunction with the June 12–13, 2018, meeting.

1. For each period, the median is the middle projection when the projections are arranged from lowest to highest. When the number of projections is even, the median is the average of the two middle projections.

2. The central tendency excludes the three highest and three lowest projections for each variable in each year.

3. The range for a variable in a given year includes all participants' projections, from lowest to highest, for that variable in that year.

4. Longer-run projections for core PCE inflation are not collected.

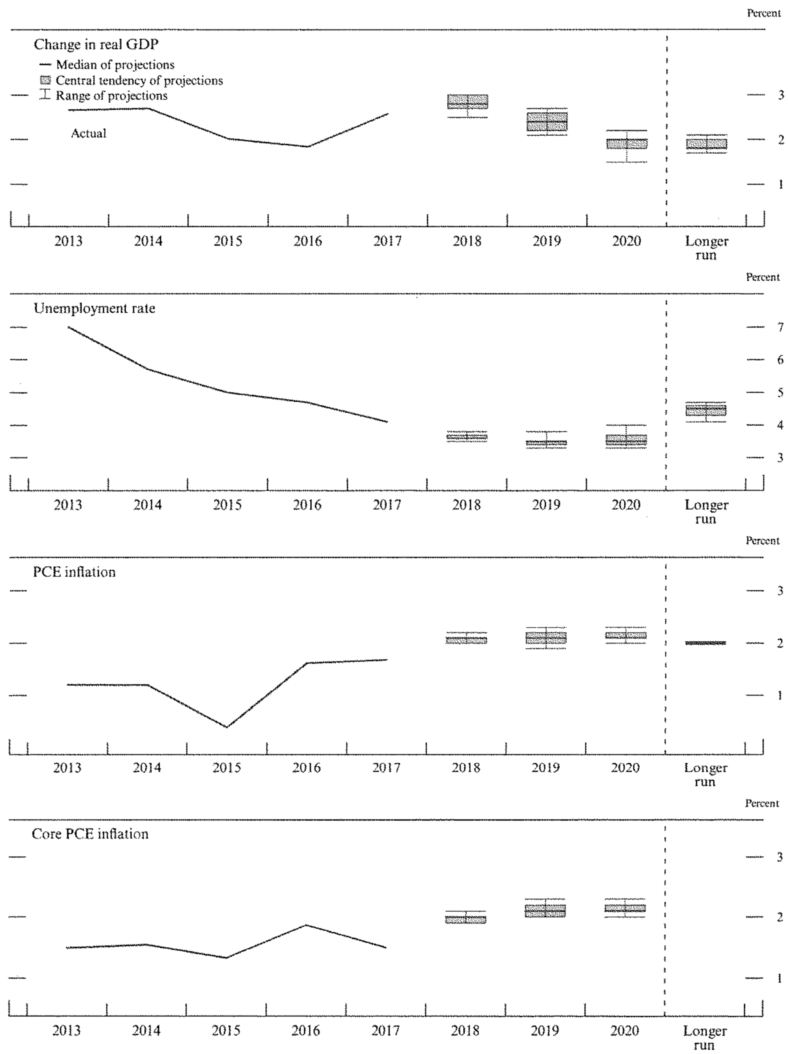
In general, participants continued to view the uncertainty attached to their economic projections as broadly similar to the average of the past 20 years. As in March, most participants judged the risks around their projections for real GDP growth, the unemployment rate, and inflation to be broadly balanced.

The Outlook for Economic Activity

The median of participants' projections for the growth rate of real GDP, conditional on their individual assessments of appropriate monetary policy, was 2.8 percent for this year and 2.4 percent for next year. The median was 2.0 percent for 2020, a touch above the median projection of longer-run growth. Most participants continued to cite fiscal policy as a driver of strong economic activity over the next couple of years. Many participants also mentioned accommodative monetary policy and financial conditions, strength in the global outlook, continued momentum in the labor market, or positive readings on business and consumer sentiment as important factors shaping the economic outlook. Compared with the March SEP, the median of participants' projections for the rate of real GDP growth was 0.1 percentage point higher for this year and unchanged for the next two years.

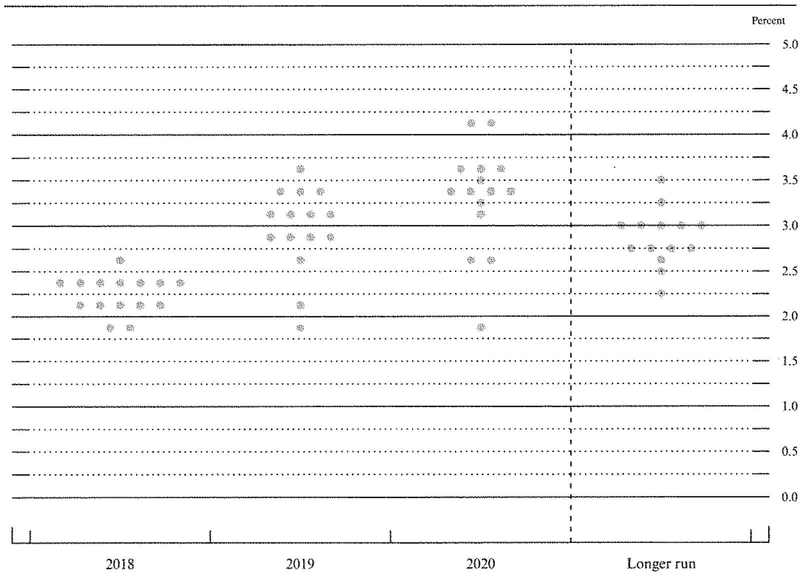
Almost all participants expected the unemployment rate to decline somewhat further over the projection period. The median of participants' projections for the unemployment rate was 3.6 percent for the final quarter of this year and 3.5 percent for the final quarters of 2019 and 2020. The median of participants' estimates of the longer-run unemployment rate was unchanged at 4.5 percent.

Figure 1. Medians, central tendencies, and ranges of economic projections, 2018–20 and over the longer run



NOTE: Definitions of variables and other explanations are in the notes to table 1. The data for the actual values of the variables are annual.

Figure 2. FOMC participants' assessments of appropriate monetary policy: Midpoint of target range or target level for the federal funds rate



NOTE: Each shaded circle indicates the value (rounded to the nearest 1/8 percentage point) of an individual participant's judgment of the midpoint of the appropriate target range for the federal funds rate or the appropriate target level for the federal funds rate at the end of the specified calendar year or over the longer run. One participant did not submit longer-run projections for the federal funds rate.

Figures 3.A and 3.B show the distributions of participants' projections for real GDP growth and the unemployment rate from 2018 to 2020 and over the longer run. The distribution of individual projections for real GDP growth this year shifted up noticeably from that in the March SEP. By contrast, the distributions of projected real GDP growth in 2019 and 2020 and over the longer run were little changed. The distributions of individual projections for the unemployment rate in 2018 to 2020 shifted down relative to the distributions in March, while the downward shift in the distribution of longer-run projections was very modest.

The Outlook for Inflation

The medians of participants' projections for total and core PCE price inflation in 2018 were 2.1 percent and 2.0 percent, respectively, and the median for each measure was 2.1 percent in 2019 and 2020. Compared with the March SEP, the medians of participants' projections for total PCE price inflation for this year and next were revised up slightly. Some participants pointed to incoming data on energy prices as a reason for their upward revisions. The median of participants' forecasts for core PCE price inflation was up a touch for this year and unchanged for subsequent years.

Figures 3.C and 3.D provide information on the distributions of participants' views about the outlook for inflation. The distributions of both total and core PCE price inflation for 2018 shifted to the right relative to the distributions in March. The distributions of projected inflation in 2019, 2020, and over the longer run were roughly unchanged. Participants generally expected each measure to be at or slightly above 2 percent in 2019 and 2020.

Appropriate Monetary Policy

Figure 3.E provides the distribution of participants' judgments regarding the appropriate target—or midpoint of the target range—for the federal funds rate at the end of each year from 2018 to 2020 and over the longer run. The distributions of projected policy rates through 2020 shifted modestly higher, consistent with the revisions to participants' projections of real GDP growth, the unemployment rate, and inflation. As in their March projections, a large majority of participants anticipated that evolving economic conditions would likely warrant the equivalent of a total of either three or four increases of 25 basis points in the target range for the federal funds rate over 2018. There was a slight reduction in the dispersion of participants' views, with no participant regarding the appropriate target at the end of the year to be below 1.88 percent. For each subsequent year, the dispersion of participants' year-end projections was somewhat smaller than that in the March SEP.

The medians of participants' projections of the federal funds rate rose gradually to 2.4 percent at the end of this year, 3.1 percent at the end of 2019, and 3.4 percent at the end of 2020. The median of participants' longer-run estimates, at 2.9 percent, was unchanged relative to the March SEP.

In discussing their projections, many participants continued to express the view that the appropriate trajectory of the federal funds rate over the next few years would likely involve gradual increases. This view was predicated on several factors, including a judgment that a gradual path of policy firming likely would appropriately balance the risks associated with, among other considerations, the possibilities that U.S. fiscal policy could have larger or more persistent positive effects on real activity and that shifts in trade policy or developments abroad could weigh on the expansion. As always, the appropriate path of the federal funds rate would depend on evolving economic conditions and their implications for participants' economic outlooks and assessments of risks.

Uncertainty and Risks

In assessing the path for the federal funds rate that, in their view, is likely to be appropriate, FOMC participants take account of the range of possible economic outcomes, the likelihood of those outcomes, and the potential benefits and costs should they occur. As a reference, table 2 provides measures of forecast uncertainty, based on the forecast errors of various private and government forecasts over the past 20 years, for real GDP growth, the unemployment rate, and total PCE price inflation. Those measures are represented

Table 2. Average historical projection error ranges

Percentage points

Variable	2018	2019	2020
Change in real GDP[1]	±1.3	±2.0	±2.1
Unemployment rate[1]	±0.4	±1.2	±1.8
Total consumer prices[2]	±0.7	±1.0	±1.0
Short-term interest rates[3]	±0.7	±2.0	±2.2

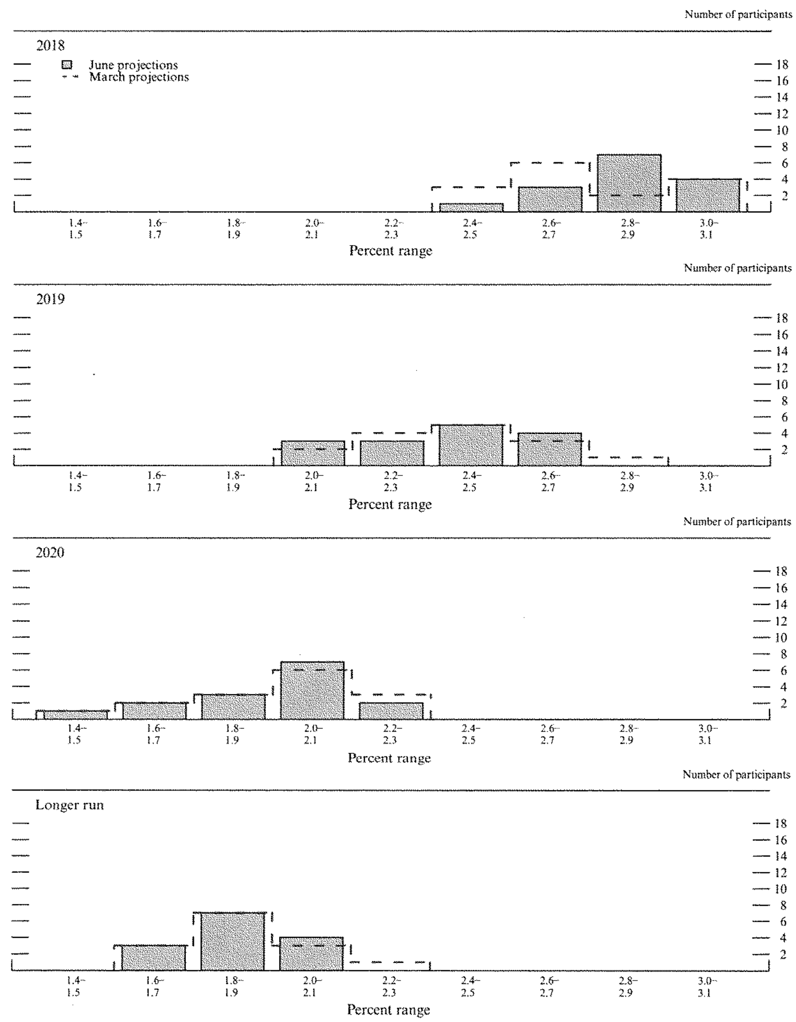
NOTE: Error ranges shown are measured as plus or minus the root mean squared error of projections for 1998 through 2017 that were released in the summer by various private and government forecasters. As described in the box "Forecast Uncertainty," under certain assumptions, there is about a 70 percent probability that actual outcomes for real GDP, unemployment, consumer prices, and the federal funds rate will be in ranges implied by the average size of projection errors made in the past. For more information, see David Reifschneider and Peter Tulip (2017), "Gauging the Uncertainty of the Economic Outlook Using Historical Forecasting Errors: The Federal Reserve's Approach," Finance and Economics Discussion Series 2017-020 (Washington: Board of Governors of the Federal Reserve System, February), www.federalreserve.gov/econresdata/feds/2017/files/2017020pap.pdf.

1. Definitions of variables are in the general note to table 1.

2. Measure is the overall consumer price index, the price measure that has been most widely used in government and private economic forecasts. Projections are percent changes on a fourth quarter to fourth quarter basis.

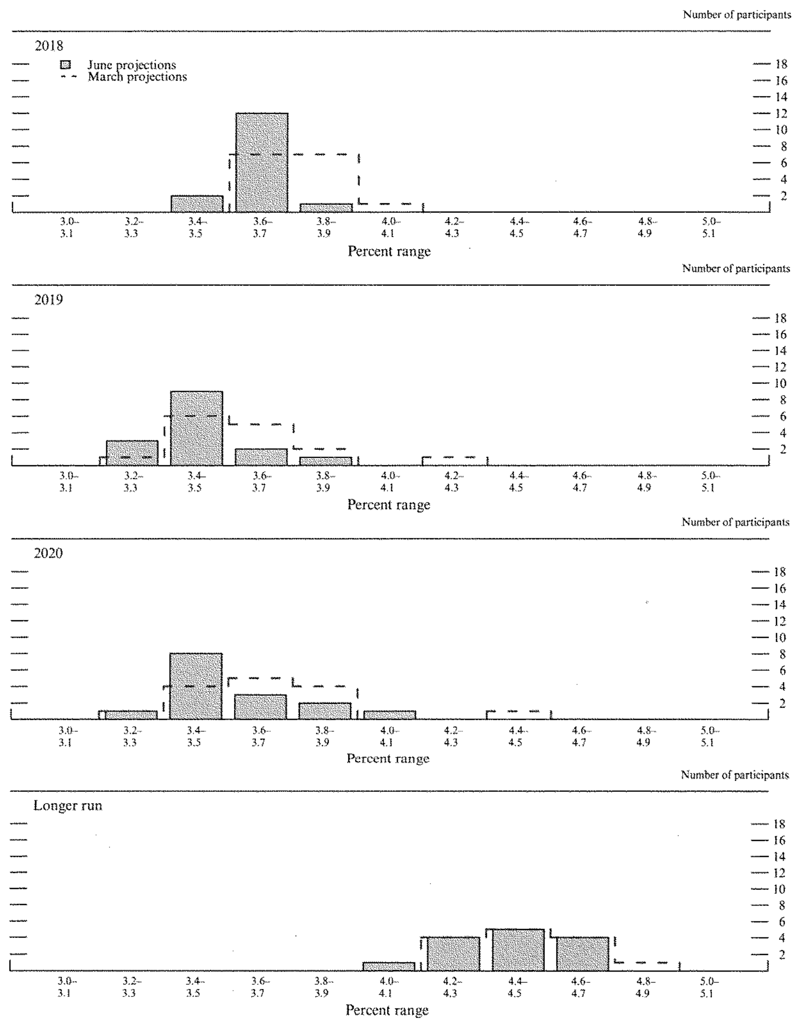
3. For Federal Reserve staff forecasts, measure is the federal funds rate. For other forecasts, measure is the rate on 3-month Treasury bills. Projection errors are calculated using average levels, in percent, in the fourth quarter.

Figure 3.A. Distribution of participants' projections for the change in real GDP, 2018–20 and over the longer run



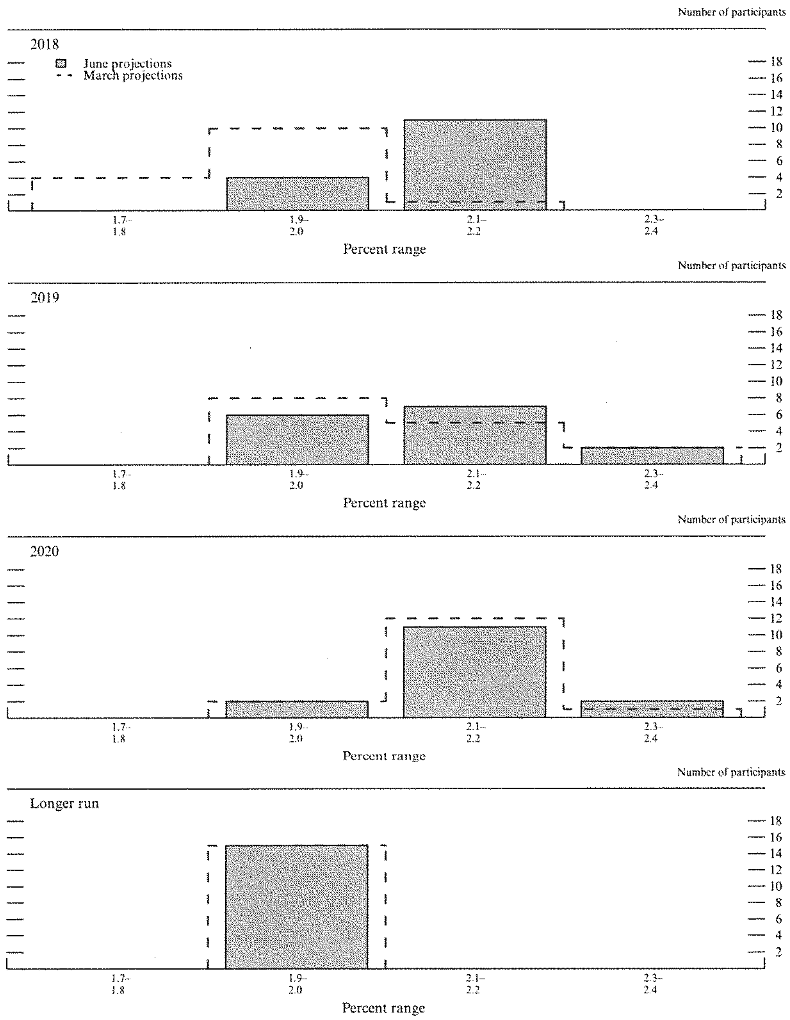
NOTE: Definitions of variables and other explanations are in the notes to table 1.

Figure 3.B. Distribution of participants' projections for the unemployment rate, 2018–20 and over the longer run



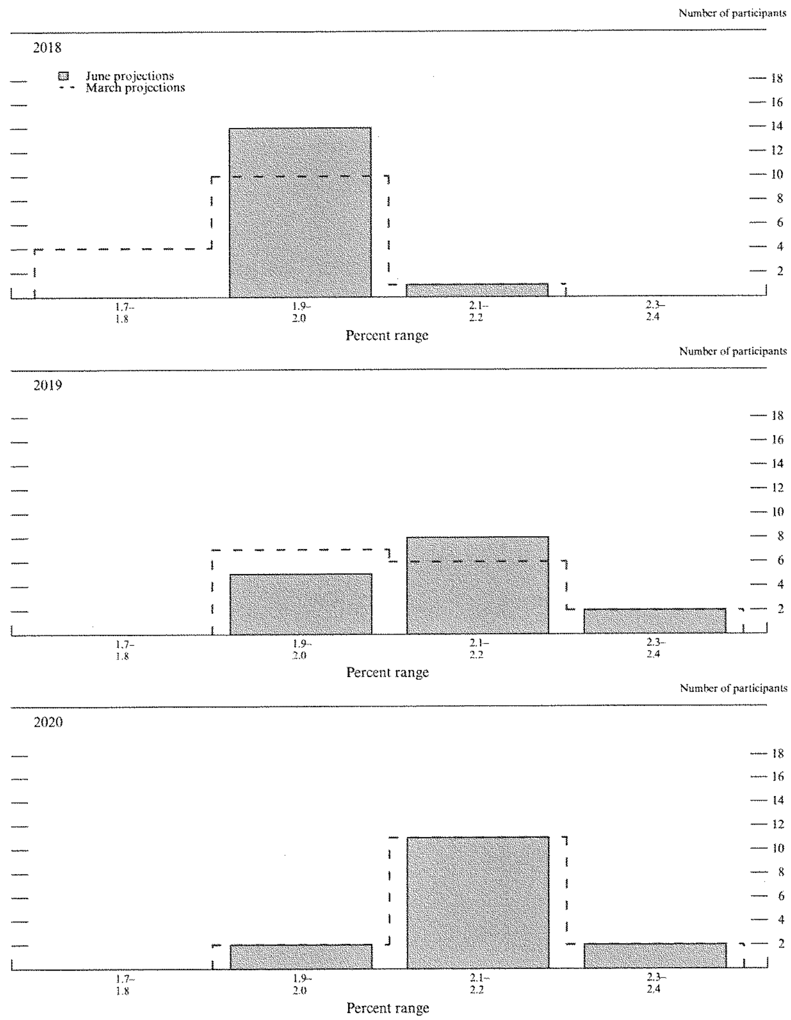
Note: Definitions of variables and other explanations are in the notes to table 1.

Figure 3.C. Distribution of participants' projections for PCE inflation, 2018–20 and over the longer run



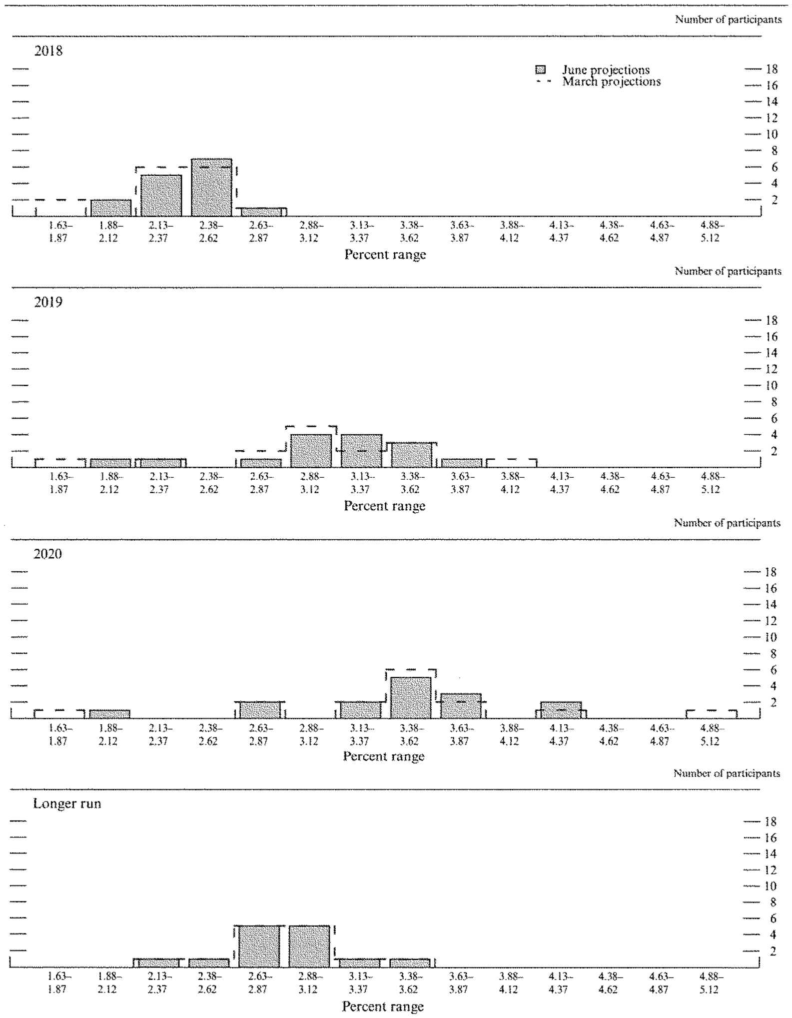
NOTE: Definitions of variables and other explanations are in the notes to table 1.

Figure 3.D. Distribution of participants' projections for core PCE inflation, 2018–20



NOTE: Definitions of variables and other explanations are in the notes to table 1.

Figure 3.E. Distribution of participants' judgments of the midpoint of the appropriate target range for the federal funds rate or the appropriate target level for the federal funds rate, 2018–20 and over the longer run



Note: Definitions of variables and other explanations are in the notes to table 1.

graphically in the "fan charts" shown in the top panels of figures 4.A, 4.B, and 4.C. The fan charts display the median SEP projections for the three variables surrounded by symmetric confidence intervals derived from the forecast errors reported in table 2. If the degree of uncertainty attending these projections is similar to the typical magnitude of past forecast errors and the risks around the projections are broadly balanced, then future outcomes of these variables would have about a 70 percent probability of being within these confidence intervals. For all three variables, this measure of uncertainty is substantial and generally increases as the forecast horizon lengthens.

Participants' assessments of the level of uncertainty surrounding their individual economic projections are shown in the bottom-left panels of figures 4.A, 4.B, and 4.C. Nearly all participants viewed the degree of uncertainty attached to their economic projections for real GDP growth, the unemployment rate, and inflation as broadly similar to the average of the past 20 years, a view that was essentially unchanged from March.[19]

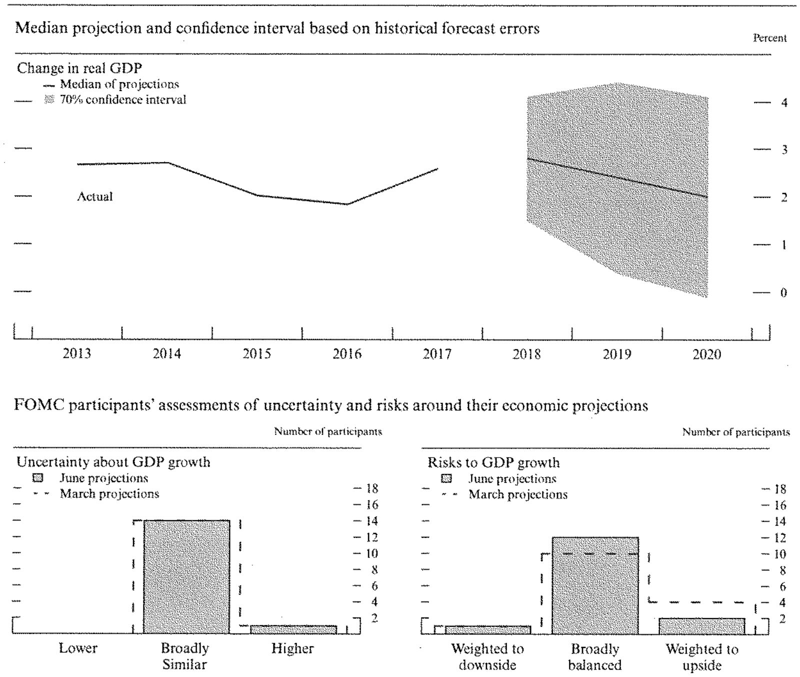
Because the fan charts are constructed to be symmetric around the median projections, they do not reflect any asymmetries in the balance of risks that participants may see in their economic projections. Participants' assessments of the balance of risks to their economic projections are shown in the bottom-right panels of figures 4.A, 4.B, and 4.C. Most participants judged the risks to their projections of real GDP growth, the unemployment rate, total inflation, and core inflation as broadly balanced—in other words, as broadly consistent with a symmetric fan chart. Compared with March, even more participants saw the risks to their projections as broadly balanced. Specifically, for GDP growth, only one participant viewed the risks as tilted to the downside, and the number of participants who viewed the risks as tilted to the upside dropped from four to two. For the unemployment rate, the number of participants who saw the risks as tilted toward low readings dropped from four to two. For inflation, all but one participant judged the risks to either total or core PCE price inflation as broadly balanced.

In discussing the uncertainty and risks surrounding their projections, several participants continued to point to fiscal developments as a source of upside risk, many participants cited developments related to trade policy as posing downside risks to their growth forecasts, and a few participants also pointed to political developments in Europe or the global outlook more generally as downside-risk factors. A few participants noted that the appreciation of the dollar posed downside risks to the inflation outlook. A few participants also noted the risk of inflation moving higher than anticipated as the unemployment rate falls.

Participants' assessments of the appropriate future path of the federal funds rate were also subject to considerable uncertainty. Because the Committee adjusts the federal funds rate in response to actual and prospective developments over time in real GDP growth, the unemployment rate, and inflation, uncertainty surrounding the projected path for the federal funds rate importantly reflects the uncertainties about the paths for those key economic variables. Figure 5 provides a graphical representation of this uncertainty, plotting the median SEP projection for the federal funds rate surrounded by confidence intervals derived from the results presented in table 2. As with the macroeconomic variables, forecast uncertainty surrounding the appropriate path of the federal funds rate is substantial and increases for longer horizons.

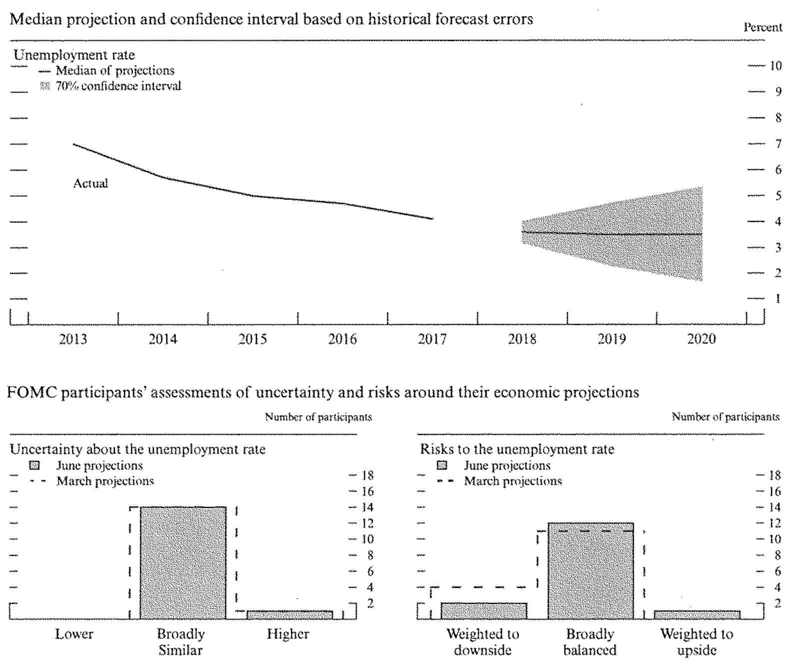
19. At the end of this summary, the box "Forecast Uncertainty" discusses the sources and interpretation of uncertainty surrounding the economic forecasts and explains the approach used to assess the uncertainty and risks attending the participants' projections.

Figure 4.A. Uncertainty and risks in projections of GDP growth



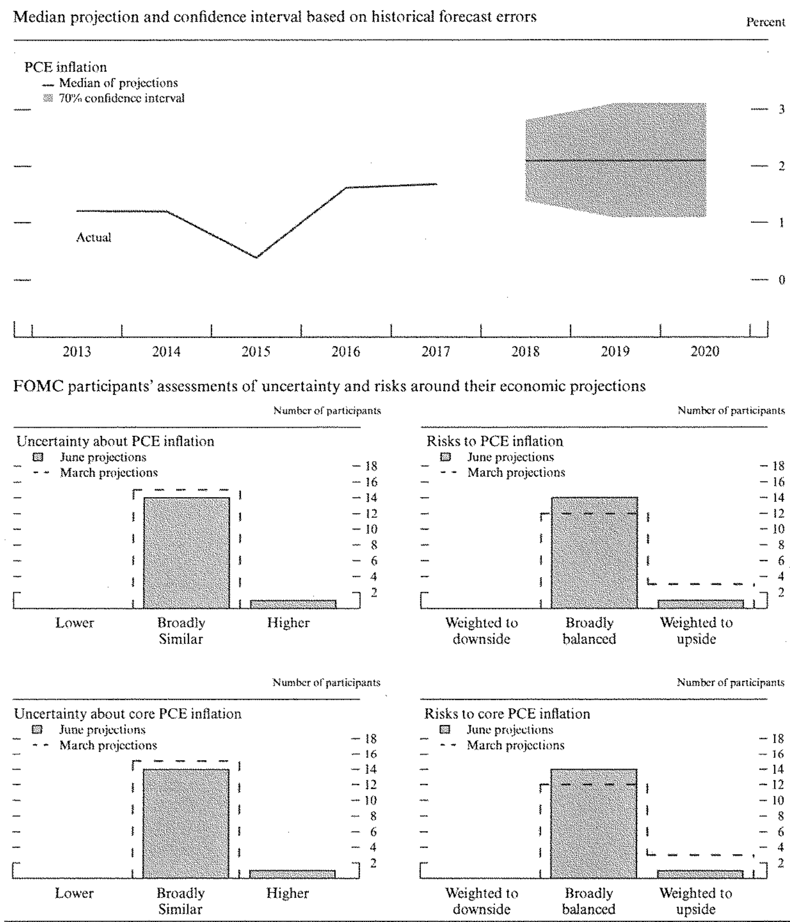
NOTE: The blue and red lines in the top panel show actual values and median projected values, respectively, of the percent change in real gross domestic product (GDP) from the fourth quarter of the previous year to the fourth quarter of the year indicated. The confidence interval around the median projected values is assumed to be symmetric and is based on root mean squared errors of various private and government forecasts made over the previous 20 years; more information about these data is available in table 2. Because current conditions may differ from those that prevailed, on average, over the previous 20 years, the width and shape of the confidence interval estimated on the basis of the historical forecast errors may not reflect FOMC participants' current assessments of the uncertainty and risks around their projections; these current assessments are summarized in the lower panels. Generally speaking, participants who judge the uncertainty about their projections as "broadly similar" to the average levels of the past 20 years would view the width of the confidence interval shown in the historical fan chart as largely consistent with their assessments of the uncertainty about their projections. Likewise, participants who judge the risks to their projections as "broadly balanced" would view the confidence interval around their projections as approximately symmetric. For definitions of uncertainty and risks in economic projections, see the box "Forecast Uncertainty."

Figure 4.B. Uncertainty and risks in projections of the unemployment rate



NOTE: The blue and red lines in the top panel show actual values and median projected values, respectively, of the average civilian unemployment rate in the fourth quarter of the year indicated. The confidence interval around the median projected values is assumed to be symmetric and is based on root mean squared errors of various private and government forecasts made over the previous 20 years; more information about these data is available in table 2. Because current conditions may differ from those that prevailed, on average, over the previous 20 years, the width and shape of the confidence interval estimated on the basis of the historical forecast errors may not reflect FOMC participants' current assessments of the uncertainty and risks around their projections; these current assessments are summarized in the lower panels. Generally speaking, participants who judge the uncertainty about their projections as "broadly similar" to the average levels of the past 20 years would view the width of the confidence interval shown in the historical fan chart as largely consistent with their assessments of the uncertainty about their projections. Likewise, participants who judge the risks to their projections as "broadly balanced" would view the confidence interval around their projections as approximately symmetric. For definitions of uncertainty and risks in economic projections, see the box "Forecast Uncertainty."

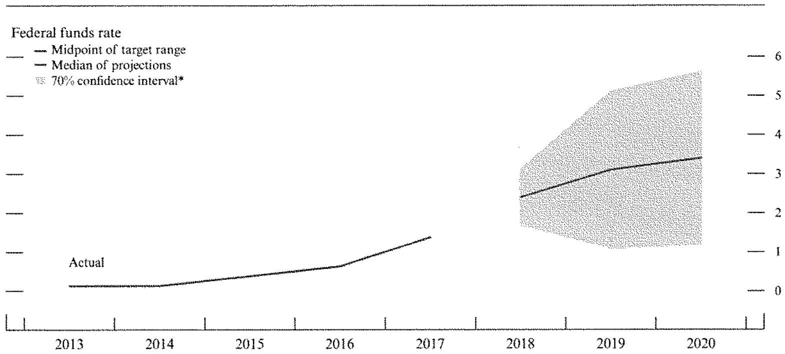
Figure 4.C. Uncertainty and risks in projections of PCE inflation



NOTE: The blue and red lines in the top panel show actual values and median projected values, respectively, of the percent change in the price index for personal consumption expenditures (PCE) from the fourth quarter of the previous year to the fourth quarter of the year indicated. The confidence interval around the median projected values is assumed to be symmetric and is based on root mean squared errors of various private and government forecasts made over the previous 20 years; more information about these data is available in table 2. Because current conditions may differ from those that prevailed, on average, over the previous 20 years, the width and shape of the confidence interval estimated on the basis of the historical forecast errors may not reflect FOMC participants' current assessments of the uncertainty and risks around their projections; these current assessments are summarized in the lower panels. Generally speaking, participants who judge the uncertainty about their projections as "broadly similar" to the average levels of the past 20 years would view the width of the confidence interval shown in the historical fan chart as largely consistent with their assessments of the uncertainty about their projections. Likewise, participants who judge the risks to their projections as "broadly balanced" would view the confidence interval around their projections as approximately symmetric. For definitions of uncertainty and risks in economic projections, see the box "Forecast Uncertainty."

Figure 5. Uncertainty in projections of the federal funds rate

Median projection and confidence interval based on historical forecast errors



NOTE: The blue and red lines are based on actual values and median projected values, respectively, of the Committee's target for the federal funds rate at the end of the year indicated. The actual values are the midpoint of the target range; the median projected values are based on either the midpoint of the target range or the target level. The confidence interval around the median projected values is based on root mean squared errors of various private and government forecasts made over the previous 20 years. The confidence interval is not strictly consistent with the projections for the federal funds rate, primarily because these projections are not forecasts of the likeliest outcomes for the federal funds rate, but rather projections of participants' individual assessments of appropriate monetary policy. Still, historical forecast errors provide a broad sense of the uncertainty around the future path of the federal funds rate generated by the uncertainty about the macroeconomic variables as well as additional adjustments to monetary policy that may be appropriate to offset the effects of shocks to the economy.

The confidence interval is assumed to be symmetric except when it is truncated at zero—the bottom of the lowest target range for the federal funds rate that has been adopted in the past by the Committee This truncation would not be intended to indicate the likelihood of the use of negative interest rates to provide additional monetary policy accommodation if doing so was judged appropriate. In such situations, the Committee could also employ other tools, including forward guidance and large-scale asset purchases, to provide additional accommodation. Because current conditions may differ from those that prevailed, on average, over the previous 20 years, the width and shape of the confidence interval estimated on the basis of the historical forecast errors may not reflect FOMC participants' current assessments of the uncertainty and risks around their projections.

* The confidence interval is derived from forecasts of the average level of short-term interest rates in the fourth quarter of the year indicated; more information about these data is available in table 2. The shaded area encompasses less than a 70 percent confidence interval if the confidence interval has been truncated at zero.

Forecast Uncertainty

The economic projections provided by the members of the Board of Governors and the presidents of the Federal Reserve Banks inform discussions of monetary policy among policymakers and can aid public understanding of the basis for policy actions. Considerable uncertainty attends these projections, however. The economic and statistical models and relationships used to help produce economic forecasts are necessarily imperfect descriptions of the real world, and the future path of the economy can be affected by myriad unforeseen developments and events. Thus, in setting the stance of monetary policy, participants consider not only what appears to be the most likely economic outcome as embodied in their projections, but also the range of alternative possibilities, the likelihood of their occurring, and the potential costs to the economy should they occur.

Table 2 summarizes the average historical accuracy of a range of forecasts, including those reported in past *Monetary Policy Reports* and those prepared by the Federal Reserve Board's staff in advance of meetings of the Federal Open Market Committee (FOMC). The projection error ranges shown in the table illustrate the considerable uncertainty associated with economic forecasts. For example, suppose a participant projects that real gross domestic product (GDP) and total consumer prices will rise steadily at annual rates of, respectively, 3 percent and 2 percent. If the uncertainty attending those projections is similar to that experienced in the past and the risks around the projections are broadly balanced, the numbers reported in table 2 would imply a probability of about 70 percent that actual GDP would expand within a range of 1.7 to 4.3 percent in the current year, 1.0 to 5.0 percent in the second year, and 0.9 to 5.1 percent in the third year. The corresponding 70 percent confidence intervals for overall inflation would be 1.3 to 2.7 percent in the current year and 1.0 to 3.0 percent in the second and third years. Figures 4.A through 4.C illustrate these confidence bounds in "fan charts" that are symmetric and centered on the medians of FOMC participants' projections for GDP growth, the unemployment rate, and inflation. However, in some instances, the risks around the projections may not be symmetric. In particular, the unemployment rate cannot be negative; furthermore, the risks around a particular projection might be tilted to either the upside or the downside, in which case the corresponding fan chart would be asymmetrically positioned around the median projection.

Because current conditions may differ from those that prevailed, on average, over history, participants provide judgments as to whether the uncertainty attached to their projections of each economic variable is greater than, smaller than, or broadly similar to typical levels of forecast uncertainty seen in the past 20 years, as presented in table 2 and reflected in the widths of the confidence intervals shown in the top panels of figures 4.A through 4.C. Participants' current assessments of the uncertainty surrounding their projections are summarized in the bottom-left panels of those figures. Participants also provide judgments as to whether the risks to their projections are weighted to the upside, are weighted to the downside, or are broadly balanced. That is, while the symmetric historical fan charts shown in the top panels of figures 4.A through 4.C imply that the risks to participants' projections are balanced, participants may judge that there is a greater risk that a given variable will be above rather than below their projections. These judgments are summarized in the lower-right panels of figures 4.A through 4.C.

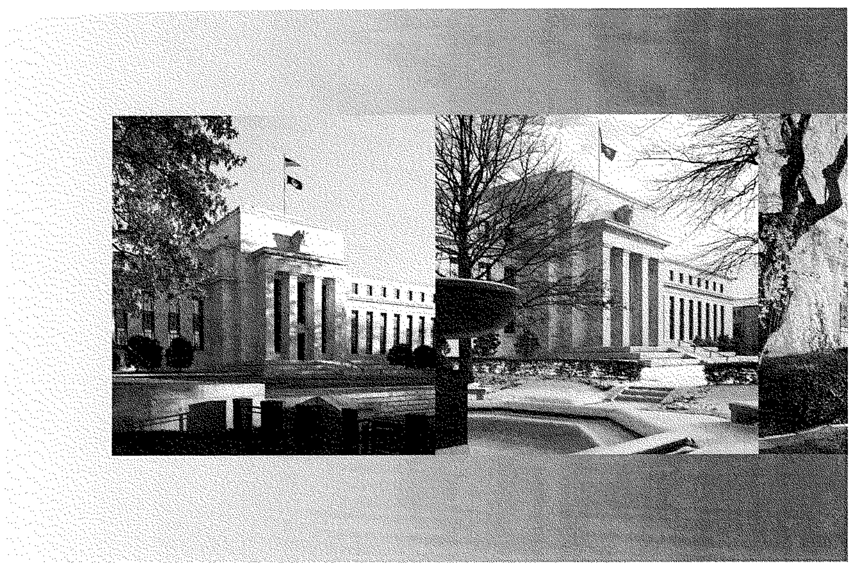
As with real activity and inflation, the outlook for the future path of the federal funds rate is subject to considerable uncertainty. This uncertainty arises primarily because each participant's assessment of the appropriate stance of monetary policy depends importantly on the evolution of real activity and inflation over time. If economic conditions evolve in an unexpected manner, then assessments of the appropriate setting of the federal funds rate would change from that point forward. The final line in table 2 shows the error ranges for forecasts of short-term interest rates. They suggest that the historical confidence intervals associated with projections of the federal funds rate are quite wide. It should be noted, however, that these confidence intervals are not strictly consistent with the projections for the federal funds rate, as these projections are not forecasts of the most likely quarterly outcomes but rather are projections of participants' individual assessments of appropriate monetary policy and are on an end-of-year basis. However, the forecast errors should provide a sense of the uncertainty around the future path of the federal funds rate generated by the uncertainty about the macroeconomic variables as well as additional adjustments to monetary policy that would be appropriate to offset the effects of shocks to the economy.

If at some point in the future the confidence interval around the federal funds rate were to extend below zero, it would be truncated at zero for purposes of the fan chart shown in figure 5; zero is the bottom of the lowest target range for the federal funds rate that has been adopted by the Committee in the past. This approach to the construction of the federal funds rate fan chart would be merely a convention; it would not have any implications for possible future policy decisions regarding the use of negative interest rates to provide additional monetary policy accommodation if doing so were appropriate. In such situations, the Committee could also employ other tools, including forward guidance and asset purchases, to provide additional accommodation.

While figures 4.A through 4.C provide information on the uncertainty around the economic projections, figure 1 provides information on the range of views across FOMC participants. A comparison of figure 1 with figures 4.A through 4.C shows that the dispersion of the projections across participants is much smaller than the average forecast errors over the past 20 years.

Abbreviations

AFE	advanced foreign economy
BBA	Bipartisan Budget Act of 2018
BLS	Bureau of Labor Statistics
C&I	commercial and industrial
Desk	Open Market Desk at the Federal Reserve Bank of New York
DPI	disposable personal income
ECB	European Central Bank
EME	emerging market economy
FOMC	Federal Open Market Committee; also, the Committee
GDP	gross domestic product
IOER	interest on excess reserves
JOLTS	Job Openings and Labor Turnover Survey
LFPR	labor force participation rate
MBS	mortgage-backed securities
Michigan survey	University of Michigan Surveys of Consumers
OIS	overnight index swap
ON RRP	overnight reverse repurchase agreement
PCE	personal consumption expenditures
SEP	Summary of Economic Projections
SLOOS	Senior Loan Officer Opinion Survey on Bank Lending Practices
S&P	Standard & Poor's
TCJA	Tax Cuts and Jobs Act
TIPS	Treasury Inflation-Protected Securities
VIX	implied volatility for the S&P 500 index



<u>Questions for The Honorable Jerome H. Powell, Chairman, Board of Governors of the Federal Reserve System, from Representative Beatty:</u>

1. Title III of the Dodd-Frank Wall Street Reform and Consumer Protection Act, P.L. 111-203, ("Dodd-Frank") transferred to the Board of Governors of the Federal Reserve System supervisory and examination authority of savings and loan holding companies and their non-depository subsidiaries in 2011. This included supervisory and examination authority of savings and loan holding companies primarily engaged in insurance underwriting activities. According to the 104th Annual Report of the Board of Governors of the Federal Reserve System, the Fed supervised 11 insurance savings and loan holding companies in 2017, including two Ohio-based companies.

Please describe the Fed's history of regulating insurance companies.

The Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act) gave the Federal Reserve supervisory and regulatory responsibilities for insurance companies that either own a federally insured thrift as part of a savings and loan holding company (SLHC) or are designated as systemically important by the Financial Stability Oversight Council (FSOC). This responsibility extends to the functionally regulated subsidiaries of these companies. Prior to the Dodd-Frank Act, the Federal Reserve supervised insurance companies that were part of a bank holding company structure. In developing its regulatory framework for supervised insurance companies, the Federal Reserve Board (Board) has sought to adapt and tailor its overall statutory responsibility for supervised institutions and to appropriately incorporate considerations for the different material characteristics of insurance companies. While the Board has developed rules specifically for supervised insurance companies, the Federal Reserve does not regulate the business of insurance, including for its supervised institutions.

As part of the Dodd-Frank Act's authorization to develop a regulatory and supervisory framework for its supervised insurance companies, the Federal Reserve has pursued several initiatives. These initiatives include the establishment of capital requirements for supervised insurance companies and the establishment of enhanced prudential standards for institutions that have been designated as systemically important. On June 3, 2016, the Board approved and invited comment on an advance notice of proposed rulemaking (ANPR) on two tailored conceptual frameworks for capital standards for supervised insurance companies. One of the proposed frameworks was tailored for insurance companies designated as systemically important, while the other was tailored for insurance companies that own a depository institution. The Federal Reserve is continuing to develop consolidated capital requirements for supervised insurance companies. The Board also approved a proposed rule on June 3, 2016, to apply enhanced prudential standards to systemically important insurance companies designated by the FSOC. These rulemakings would apply consistent liquidity, corporate governance, and risk-management standards to these firms. In addition, the Board regularly reviews new and existing guidance and regulations to determine the appropriate applicability for insurance savings and loan holding companies (ISLHCs) while continuing to develop appropriate regulations.

2. Currently, how many insurance savings and loan holding companies does the Fed supervise?

The Federal Reserve currently supervises 11 ISLHCs.

3. Do you believe that you have the authority to tailor supervisory regulations with regards to insurance savings and loan holding companies? If so:

a. Can you provide a complete list and short description of every instance where the Fed has explicitly tailored supervisory and examination regulations, guidance or supervisory letters to insurance savings and loan holding companies since July 21, 2011?

The Home Owners' Loan Act of 1933 (via the Dodd-Frank Act) provides the Federal Reserve the flexibility to tailor appropriately its regulations and guidance for ISLHCs, to ensure each firm's safety and soundness without imposing bank-centric standards.

As part of the general supervisory process, the Federal Reserve tailors the application of supervisory letters (i.e., guidance) and regulations to ISLHCs based on the firm's size, risk profile, structure, and business model. Federal Reserve supervisors work closely with state insurance regulators and other relevant functional regulators of material business lines to ensure the Federal Reserve's supervisory expectations are appropriately aligned with each firm's business and risk profiles.

Below is a sample list and summary of significant supervisory guidance and regulations that the Federal Reserve has tailored or exempted ISLHCs from since July 21, 2011.

Exemption from Dodd-Frank Act Capital, Stress Testing, and Liquidity Requirements: The expectations in Supervision and Regulation (SR) Letter 12-7, "Supervisory Guidance on Stress Testing for Banking Organizations with More Than $10 Billion in Total Consolidated Assets," and in the Comprehensive Capital Analysis and Review/Dodd-Frank Annual Stress Testing have not been applied to ISLHCs to date but do apply to bank holding companies that meet the same asset thresholds. In addition, the Federal Reserve did not apply Dodd-Frank Act bank liquidity requirements (e.g., liquidity coverage ratio) and Basel III regulatory capital standards to ISLHCs, as those specific capital and liquidity standards are too bank-centric.

Applicability of the Federal Reserve's Holding Company Rating System: In 2016, the Board issued a Notice for Public Comment regarding the view that the permanent application of the RFI Rating System (Risk Management, Financial Condition, and Impact) to SLHCs would not apply to ISLHCs. This notice stated the Board's intent to review "whether a modified version of the RFI rating system or some other supervisory rating system is appropriate for these firms on a permanent basis." Similarly, in a 2017 Notice of Proposed Rulemaking, the proposed Large Financial Institution (LFI) Rating System to be used at large firms supervised by the Federal Reserve would not apply to large ISLHCs. If the LFI Rating System is implemented, the Board intends to review the potential application and/or modification for ISLHCs. ISLHCs will continue to be rated under the RFI rating system on an indicative basis while the Board considers rating system options.

The Federal Reserve has tailored the application of indicative RFI ratings to ISLHCs through internal guidance, which are called Advisory Letters. Internal guidance provides Federal Reserve examiners direction on how to tailor their analysis of the financial conditions of ISLHCs to reflect the differences associated with the business of insurance. It also directs examiners to rely, to the fullest extent possible, on the work of an ISLHC's state insurance regulator(s) when assessing the risk management of insurance-specific activities at an ISLHC. Internal guidance requires Federal Reserve examiners to incorporate an ISLHC's Own Risk Solvency Assessments (ORSAs), a state insurance regulator requirement, in their evaluations and to discuss results from the ORSA with the appropriate state insurance regulator(s).

Supervisory Guidance Applicable to SLHCs prior to July 21, 2011: SR Letter 14-9, "Incorporation of Federal Reserve Policies into the Savings and Loan Holding Company Supervision Program," lists guidance that was applicable to SLHCs prior to the transfer of supervisory authority from the Office of Thrift Supervision to the Federal Reserve. Internal guidance issued on general supervision allows for tailoring for ISLHCs, if necessary. For example, SR Letter 12-17, "Consolidated Supervision for Large Financial Institutions," is applicable to ISLHCs with $50 billion or more in assets (now $100 billion following enactment of S. 2155), and addresses generally the supervision program for large firms. Guidance issued on specific topics addressed in SR Letter 12-17, however, will have insurance-specific tailoring.

The Board is in the process of developing guidance that outlines the Federal Reserve's supervisory framework for ISLHCs. This guidance will also discuss how supervisory guidance is applied and tailored, as well as the Federal Reserve's interagency coordination activities with state insurance regulators and other functional regulators of ISLHCs.

b. Does the Fed have any additional plans to tailor new and/or existing regulations, guidance, or supervisory letters to insurance savings and loan holding companies in the future? If so:

i. Please describe those plans with specificity to the fullest extent possible.

ii. When does the Fed expect to undertake these actions?

Board staff is currently developing guidance that provides an overview of its supervisory framework for ISLHCs. This guidance will clarify the Federal Reserve's supervisory objectives and approach; articulate the Federal Reserves's process for applying and tailoring supervisory guidance; and demonstrate how the Federal Reserve relies on, and coordinates with, the primary functional regulators (i.e., state insurance regulators, federal and state banking regulators, and any other domestic or foreign supervisors) of ISLHCs and their regulated subsidiaries. In addition, this guidance will describe the Board's process for reviewing the applicability of guidance and regulations to ISLHCs and its oversight duties of ISLHC supervisory activities. The Board expects to issue this guidance in the near future. The Board will continue to assess new guidance and regulations for applicability to ISLHCs and tailor applicable guidance, when appropriate.

Questions for The Honorable Jerome H. Powell, Chairman, Board of Governors of the Federal Reserve System, from Representative Gottheimer:

1. In the 2015 rulemaking for the risk-based capital surcharges for Global Systemically Important Bank Holding Companies (GSIBs), the Federal Reserve Board (FRB) notes the need to periodically review the coefficients to update its GSIB Method 2 in relation to economic growth. The FRB rule states, "To ensure changes in economic growth do not unduly affect firms' systemic risk scores, the Board will periodically review the coefficients and make adjustments as appropriate."

- **Are there any discussions or plans to update or re-examine the GSIB coefficients, particularly given recent economic growth?**
- **Does the FRB plan to periodically review coefficient or are there economic factors that will trigger such a review? If periodically, how frequently will the reviews be conducted?**
- **How has recent economic growth impacted scores under the GSIB methodology?**

The Federal Reserve Board's (Board) capital rules have been designed to significantly reduce the likelihood and severity of future financial crises by reducing both the probability of failure of a large banking organization and the consequences of such a failure were it to occur. Capital rules and other prudential requirements for large banking organizations should be set at a level that protects financial stability and maximizes long-term, through-the-cycle, credit availability and economic growth. Consistent with these principles, the Board originally calibrated the GSIB surcharge so that—given the circumstances of the financial system—each GSIB would hold enough capital to lower its probability of failure so that the expected impact of its failure on the financial system would be approximately equal to that of a large non-GSIB.

The bulk of post-crisis regulation is largely complete, with the important exception of the U.S. implementation of the recently concluded Basel Committee agreement on bank capital standards. It is therefore a natural and appropriate time to step back and assess those efforts. The Board is conducting a comprehensive review of the regulations in the core areas of post-crisis reform, including capital, stress testing, liquidity, and resolution. The objective of this review is to consider the effect of those regulatory frameworks on the resiliency of the financial system, including improvements in the resolvability of banking organizations, and on credit availability and economic growth.

In general, I believe overall capital for our largest banking organizations is at about the right level. Critical elements of our capital structure for these organizations include stress testing, the stress capital buffer, and the enhanced supplementary ratio. Work is underway to finalize the calibration of these fundamental building blocks, all of which form part of the system in which the GSIB surcharge has an effect. In this regard, I would note that the GSIB surcharge rule does not take full effect until January 2019.

Questions for The Honorable Jerome H. Powell, Chairman, Board of Governors of the Federal Reserve System, from Representative Huizenga:

1. When the GSIB surcharge was finalized in 2015, the FRB recognized that the GSIB surcharge "may be affected by economic growth that does not represent an increase in systemic risk." Accordingly, the FRB committed, "[t]o ensure changes in economic growth do not unduly affect firms' systemic risk scores, the Board will periodically review the coefficients and make adjustments as appropriate." Do you continue to believe, as you have testified, that the United States has experienced significant economic growth in recent years? Accordingly, is the FRB monitoring and prepared to update the requirement accordingly?

The Federal Reserve Board's (Board) capital rules have been designed to significantly reduce the likelihood and severity of future financial crises by reducing both the probability of failure of a large banking organization and the consequences of such a failure were it to occur. Capital rules and other prudential requirements for large banking organizations should be set at a level that protects financial stability and maximizes long-term, through-the-cycle, credit availability and economic growth. Consistent with these principles, the Board originally calibrated the GSIB surcharge so that—given the circumstances of the financial system—each GSIB would hold enough capital to lower its probability of failure so that the expected impact of its failure on the financial system would be approximately equal to that of a large non-GSIB.

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<u>Questions for The Honorable Jerome H. Powell, Chairman, Board of Governors of the Federal Reserve System, from Representative Messer:</u>

1. Chairman Powell, thank you for testifying before the House Financial Services Committee on July 18, 2018. On May 24, 2018, President Trump signed S. 2155, the Economic Growth, Regulatory Relief, and Consumer Protection Act, into law. I am concerned about the implementation of Section 403 of the Act, which is entitled "Treatment of Certain Municipal Obligations." Specifically, subsection (b) of that section states:

> **Not later than 90 days after the date of the enactment of this Act, the Federal Deposit Insurance Corporation, the Board of Governors of the Federal Reserve System, and the Comptroller of the Currency shall amend the final rule entitled "Liquidity Coverage Ratio: Liquidity Risk Measurement Standards" (79 Fed. Reg. 61439 (October 10, 2014)) and the final rule entitled "Liquidity Coverage Ratio: Treatment of U.S. Municipal Securities as High-Quality Liquid Assets" (81 Fed. Reg. 21223 (April 11, 2016)) to implement the amendments made by this section.**

Can you detail the steps the Federal Reserve has taken to work with the FDIC and OCC to amend the relevant rules relating to the Liquidity Coverage Ratio to meet the August 22, 2018, deadline as established by the Act?

Following the enactment of S. 2155, the Economic Growth, Regulatory Relief, and Consumer Protection Act (EGRRCPA), staff from the Federal Reserve, FDIC, and OCC (the agencies) took action to comply with the requirements of the statute. Section 403 of the EGRRCPA required the agencies, within 90 days of enactment, to treat municipal obligations as high-quality liquid assets (HQLA) under their liquidity coverage ratio (LCR) rules if the municipal obligations are investment grade and considered liquid and readily marketable.

On August 22, 2018, the agencies jointly issued an interim final rule (IFR) to treat eligible municipal obligations as HQLA. The IFR took effect upon publication in the Federal Register on August 31, 2018, and public comments on the IFR were accepted by the agencies until October 1, 2018.

Questions for The Honorable Jerome Powell, Chairman, Board of Governors of the Federal Reserve System from Representative Sherman:

1. Home price and rent growth are driving inflation. Are there measures the Federal Reserve could take to stimulate single family and apartment construction and thereby ease inflation?

The Federal Open Market Committee (FOMC or Committee) monitors the housing market carefully as it is an important sector of the economy. However, monetary policy affects the economy as a whole and cannot be used to stimulate single family and apartment construction in isolation. To the extent that there are supply constraints in the housing sector, addressing them is well beyond the responsibility of the Federal Reserve. Rather, the Federal Reserve aims to promote an economic environment with stable inflation and sustainable economic growth, which helps support investment in all sectors of the economy, including housing.

2. With low unemployment, how does the Federal Reserve plan to curb inflation?

The Federal Reserve conducts monetary policy in order to promote maximum employment and low and stable inflation at the rate of 2 percent per year. While there exists an economic relationship between slack in the labor market and inflation, this relationship appears to be much weaker than in previous decades. In the latest Summary of Economic Projections, the median projection of FOMC participants indicates that, under appropriate monetary policy, the unemployment rate will remain low and inflation will stay close to 2 percent. That said, the Committee is always monitoring inflation developments carefully and is ready to adjust the course of monetary policy to achieve its objectives.

3. To the extent the Federal Reserve decides to continue to raise interest rates to combat signs of increasing inflation, are you concerned that these steps could lead to a slower economy, or possibly a recession?

As I discussed in remarks I gave at a symposium hosted by the Federal Reserve Bank of Kansas City in Jackson Hole in August, there are two main risks confronting policymakers currently: moving too fast and needlessly shortening the expansion, versus moving too slowly and risking a destabilizing overheating. Minutes of FOMC meetings and other Federal Reserve communications inform the general public that our discussions focus keenly on the relative salience of these risks.

I see the current path of gradually raising interest rates as the FOMC's approach to taking seriously both of these risks. While the unemployment rate is below the Committee's estimate of the longer-run natural rate, estimates of this rate are quite uncertain. The same is true of estimates of the neutral interest rate. We therefore refer to many indicators when judging the degree of slack in the economy or the degree of accommodation in the current policy stance. We are also aware that, over time, inflation has become much less responsive to changes in resource utilization.

While inflation has recently moved up near 2 percent, we have seen no clear sign of an acceleration above 2 percent, and there does not seem to be an elevated risk of overheating. This is good news, and we believe that this good news results in part from the ongoing normalization process, which has moved the stance of policy gradually closer to the FOMC's rough assessment of neutral as the expansion has continued. As the most recent FOMC statement indicates, if the strong growth in income and jobs continues, further gradual increases in the target range for the federal funds rate will likely be appropriate.

My colleagues and I are carefully monitoring incoming data, and we are setting policy to do what monetary policy can do to support continued growth, a strong labor market, and inflation near 2 percent.

4. Are you concerned at all about the possibility of "stagflation"? In addition, are you concerned that with interest rates still being relatively low, you would have limited tools to combat a recession when one occurs?

"Stagflation" is typically defined as involving a combination of substandard growth or above-normal unemployment, and higher-than-desired inflation. There are many risks in the macroeconomy at any given time, and the future course of the economy is always difficult to discern. My colleagues and I are carefully monitoring incoming data, and are on alert for unforeseen developments of any kind. However, at present, the risk of stagflation appears to be quite low.

6. How concerned are you about the risks of an inverted yield curve, which historically leads to a recession? Will you let the yield curve invert?

The Federal Reserve does not control or target the Treasury yield curve. The shape of the yield curve is one of many financial and economic indicators that we consider in assessing the economic outlook and the appropriate course of monetary policy. It is normal for the yield curve to flatten over the course of an economic expansion as the FOMC scales back monetary policy accommodation. The FOMC's policies reflect the strong performance of the U.S. economy and are intended to help make sure that this trend continues. Currently, the risks to the economic outlook appear roughly balanced. In other words, when weighing a wide range of relevant information, it does not appear that there is an elevated risk of a recession. The FOMC will continue to make its monetary policy decisions to best promote its maximum employment and price stability objectives.

Based on historical data, there is a statistical relationship between an inverted yield curve and the probability of a subsequent recession. However, research is not conclusive as to whether an inverted yield curve causes recessions. Since the financial crisis, longer-term yields have been held down by many factors other than policy rate expectations, so it is uncertain whether the historical predictive relationship is still a reliable guide.

9. What is your goal for the 10-year Treasury note by the end of 2019?

The Federal Reserve does not control or target the yield on the ten-year Treasury note. To fulfill its congressional mandate of maximum employment and price stability, the FOMC adjusts the stance of monetary policy primarily by changing the target range for the federal funds rate. The yield on the ten-year Treasury note is one of many indicators that the Committee considers in its policy deliberations.

10. Do you see the economy staying strong for the next 2 years or do you see a possible recession in 2019 or 2020?

As I noted in remarks in Jackson Hole, over the course of a long recovery, the U.S. economy has strengthened substantially. The unemployment rate has declined steadily for almost nine years and, at 3.9 percent, is now near a 20-year low. Most people who want jobs can find them. Inflation has moved up and is now near the FOMC's objective of 2 percent after running generally below that level for six years. With solid household and business confidence, healthy levels of job creation, rising incomes, and fiscal stimulus arriving, there is good reason to expect that this strong performance will continue.

11. What are you going to do to keep stimulating business growth, which ultimately stimulates the economy for individuals?

To support the ongoing growth of the economy, my colleagues and I will focus intently on pursing the dual mandate given to us by the Congress -- to promote price stability and maximum employment. We strongly believe that pursuing that dual mandate is the best means available to us to set a positive backdrop for decision-making by businesses and households, consistent with their long-term wellbeing.

Questions for The Honorable Jerome H. Powell, Chairman, Board of Governors of the Federal Reserve System, from Representative Sherman:

5. What effect do you think the President's trade policies will have on the economy?

As you know, trade policy is the responsibility of Congress and the Administration. The Federal Reserve's statutory mandate is to formulate monetary policy to achieve price stability and maximum sustainable employment.

In general, trade and access to global markets provide many benefits for businesses and the people they employ, including larger and deeper markets for their products and a wider selection of inputs for production. Consumers also benefit through a greater variety of goods and more competitive prices. That said, the benefits of trade are not shared equally by all people and all sectors of the economy. Policymakers and economists alike are increasingly cognizant of the need to design policies to support workers and families so that the benefits of trade can be more widely shared.

In pursuit of our statutory objectives, we monitor the effects of various developments, including trade policy, on the economy. Tariff increases, by both the United States and other countries, have already affected individual businesses and industries. Although the direct effects of announced measures on the overall U.S. economy are likely to be fairly modest, there is a possibility that trade tensions could disrupt supply chains and undermine business confidence. As indicated in the Federal Open Market Committee's (FOMC or Committee) minutes and the Beige Book, our business contacts increasingly report that trade policy developments are raising input costs and creating policy uncertainty, which is causing some firms to delay investments.

The Administration's current trade policy process is still ongoing. If the end result is a world with higher tariffs in many countries, then experience suggests there will be significant negative effects for the U.S. economy. On the other hand, if the end result is a world with lower trade barriers and a more level playing field, then the U.S. economy will benefit.

7. How concerned are you about the danger of a crisis in emerging market economies with their currencies losing value and with the Federal Open Market Committee raising rates? How concerned are you about risks of contagion to the United States if there is a crisis in emerging market economies?

Emerging market countries are an important part of the global economy, accounting for about half of U.S. trade and over half of global economic growth. Accordingly, developments in emerging markets matter for the U.S. economy.

The Federal Reserve adjusts its policy to achieve its congressionally mandated objectives of price stability and maximum employment in the United States. Rising U.S. interest rates largely reflect the strength of the U.S. economy, which is good news for the rest of the world, and emerging markets are no exception.

Higher U.S. interest rates and a rising dollar may exert some financial pressure on emerging markets, especially those that have borrowed considerably in U.S. dollars. Only a few emerging market economies have faced substantial financial distress this year, and those are countries with particular vulnerabilities, such as high debt, current account deficits, and inflation. Still, we continue to monitor emerging market developments, as more-widespread economic difficulties could lead to heightened volatility in global financial markets and reduce demand for U.S. exports.

The Federal Reserve strives to communicate its thinking about monetary policy as clearly and transparently as possible, which should limit the likelihood of market overreaction to its decisions. We have signaled for some time that we expect to raise interest rates only gradually as the U.S. economy strengthens. Ultimately, sustaining the economic expansion and domestic financial stability will help support prosperity and growth abroad as well.

8. How will diverging rate paths between the United States and the European Union play out? Is there anything in the data that suggests rising inflation will become a significant issue?

The Federal Reserve's monetary policy is focused on our congressionally mandated objectives of maximum employment and price stability in the United States. In pursuing those objectives, we monitor developments abroad, which can affect U.S. economic activity and inflation through a number of channels. For instance, if the path of foreign interest rates falls short of expectations, that will likely put some upward pressure on the dollar and also could weigh on U.S. long-term bond yields. With those effects offsetting each other to some extent, lower foreign interest rates should have only a marginal impact on the U.S. economy.

Economies vary in terms of their inflation performance and the degree of labor market slack. It should be expected that monetary policy will also vary across economies in response to local conditions. Currently, the U.S. labor market is very strong and U.S. inflation has moved to near 2 percent. In the euro area, the economic recovery continues to be sluggish compared to the United States, and inflation has persisted well below their 2 percent target, so the European Central Bank has only recently begun to signal a gradual reduction in monetary accommodation. The divergence between U.S. and euro-area interest rates has contributed the U.S. dollar's appreciation against the euro.

An appreciating dollar makes our exports more expensive abroad and makes imports more competitive relative to domestic production. All else equal, that circumstance would reduce net exports and be a drag on U.S. economic growth. That said, the underlying strength of demand in the United States, supported by healthy growth in consumption and investment, seems to be sufficiently robust to overcome the drag from a higher dollar.

A strong dollar, which lowers prices for U.S. imports, also tends to restrain U.S. price inflation, whereas tightening resource slack tends to push up inflation. In the United States, inflation has recently moved up to near 2 percent, but, as noted earlier, we have not seen a clear sign of an acceleration above 2 percent, and there does not seem to be an elevated risk of overheating. That said, the Committee monitors inflation developments carefully and sets monetary policy accordingly.

<u>Questions for The Honorable Jerome H. Powell, Chairman, Board of Governors of the Federal Reserve System, from Representative Sinema:</u>

1. The Arizona Chamber of Commerce notes that a trade war immediately threatens over 250 million dollars in Arizona exports and 772,800 Arizona jobs supported by global trade. Eighty-eight percent of Arizona exporters are small or medium-sized businesses, making the effects of trade war particularly acute for Arizona entrepreneurs and family-run businesses. Job-killing tariffs will target Arizona-made agricultural goods like apples and cotton, imperiling the livelihoods of Arizona family farmers. Tariffs also impose costs directly passed on to consumers, forcing Arizona families to pay more for their everyday purchases. One of the functions of the Federal Reserve System is to strengthen U.S. standing in the world economy. How do you anticipate the Administration's tariff policies affecting that work?

As you know, Congress has entrusted the Federal Reserve with the statutory dual mandate of achieving price stability and maximum employment. Trade policy is the responsibility of Congress and the Administration.

In general, trade and access to global markets provide many benefits for businesses and the people they employ, including larger and deeper markets for their products and a wider selection of inputs for production. Consumers also benefit through a greater variety of goods and more competitive prices. Because of these and other benefits, more open and globalized economies generally have been faster growing, more productive, and more dynamic. That said, the benefits of trade are not shared equally by all people and all sectors of the economy. Policymakers and economists alike are increasingly cognizant of the need to design policies to support workers and families so that the benefits of trade can be more widely shared.

Since World War II, the United States has been a global leader in building a rules-based trading system, which has resulted in, over time, the consistent lowering of tariffs and growth in trade. The Administration's current trade policy process is still ongoing. If the end result is a world with higher tariffs in many countries, then experience suggests there will be significant negative effects for the U.S. economy. On the other hand, if the end result is a world with lower trade barriers and a more level playing field, then the U.S. economy will benefit.

To date, tariff increases, both by the United States and other countries, have already affected individual businesses and industries, in particular the agricultural sector. Moreover, our business contacts increasingly report that trade developments are creating policy uncertainty, which is causing some firms to delay investments. Although the direct effects of announced measures on the overall U.S. economy are likely to be fairly modest, there is a possibility that trade tensions could disrupt supply chains and undermine business confidence. We continue to monitor trade developments and their effects on U.S. employment and inflation.

Questions for The Honorable Jerome H. Powell, Chairman, Board of Governors of the Federal Reserve System, from Representative Sinema:

2. I was pleased to see economic growth in Q2 that is considerably stronger than that of Q1. Yet too many Arizona families aren't seeing wages rise in a commensurate manner. For many Arizonans, wages have stagnated or even declined when factoring in inflation. At the same time, the cost of health care and other essential goods and services continues to rise, causing many families to feel the pinch. What explanation can you offer for wages failing to trend upward with economic growth?

Although most indicators suggest that the labor market is quite strong, wage growth has remained moderate. Generalizing across various measures, average annual wage gains have picked up a little in recent years, from about 2 percent a few years ago to about 2½ to 3 percent now. Even taking into account relatively low inflation, the gains in inflation-adjusted wages have averaged less than were seen prior to the recession. And of course, those figures are averages. Some people have seen larger gains than that and unfortunately some have seen less.

One important factor for the disappointing pace of overall wage gains, in the face of a strong labor market, is that productivity has increased relatively slowly over the past several years. Over time, productivity gains are necessary to support rising living standards. Many other factors influence wages as well. There is no consensus about their relative importance, but some of the other factors cited by economists include globalization, demographic changes (e.g., the retirement of higher paid older workers) which affect measured average wage growth, hidden labor market slack (e.g., the low labor force participation rate), declines in unionization, rising employer concentration, and an increase in the use of non-compete agreements and non-poaching agreements.[1]

3. Congress passed the Volcker Rule as part of Dodd-Frank to reduce risky activities, such as high-risk proprietary trading, at banks. We share the goal of reducing systemic risk in our financial system to ensure another crisis does not happen. At the same time, we also want to help companies grow and innovate by ensuring they have sufficient access to capital. The current definition of "covered fund" in the Volcker Rule permits banks to provide capital and credit to businesses but prohibits doing so via a fund structure.

I'm incredibly proud of Arizona's public universities, which create opportunities for Arizonans to turn good ideas into great startups – creating jobs and growing the economy. These startup incubators are placed at risk if the startup structures itself as a covered fund. This is perplexing because fund structures allow banks to diversify risk, which would appear to be consistent with the goal of the Volcker Rule.

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[1] *See* Alan B. Krueger, Reflections on Dwindling Worker Bargaining Power and Monetary Policy, Luncheon Address at the Jackson Hole Economic Symposium (Aug. 24, 2018), *available at* https://www.kansascityfed.org/~/media/files/publicat/sympos/2018/papersandhandouts/824180824kruegerremarks.pdf?la=en; *see also* Ernie Tedeschi, *Unemployment Looks Like 2000 Again. But Wage Growth Doesn't*, The New York Times, Oct. 22, 2018, *available at* https://www.nytimes.com/2018/10/22/upshot/mystery-slow-wage-growth-econony.html.

What are your thoughts on this? Is there intention to address aspects of the definition of covered fund so that banks are not discouraged from diversifying risk?

The Board, along with the Office of the Comptroller of the Currency, Federal Deposit Insurance Corporation, Commodity Futures Trading Commission, and Securities and Exchange Commission (the "agencies") adopted regulations to implement section 619 of the Dodd-Frank Wall Street Reform and Consumer Protection Act (12 U.S.C. § 1851) (the "Volcker Rule") in 2013. These regulations included a definition of "covered fund" that, in the agencies' view, was consistent with the statutory purpose of the Volcker Rule to limit certain investment activities of banking entities. Subsequently, and based on experience with the Volcker Rule regulations, the agencies identified opportunities for improvement and proposed amendments to the Volcker Rule regulations in May 2018.[2]

The proposal requests comment on how to tailor the regulations governing a banking entity's covered fund activities. For example, the proposal asks whether a different definition of "covered fund" would be appropriate. In addition, the proposal requests comment on potential exemptions for particular types of funds, or funds with particular characteristics.

Since proposing the amendments in May, the agencies have held meetings with and received comments from interested parties regarding the treatment of covered funds. The agencies expect to meet with and receive comments from interested parties throughout the comment period, and will carefully consider each comment to determine whether any changes to the covered fund regulations would be appropriate.

[2] 83 Fed. Reg. 33,432 (July 17, 2018).

Questions for The Honorable Jerome H. Powell, Chairman, Board of Governors of the Federal Reserve System from Representative Stivers:

1. Chairman Powell: As you know, the U.S. Method 2 G-SIB framework created fixed coefficients that apply to each indicator used in the surcharge calculation. This incentivizes firms to reduce their risk. However, despite recognizing the need to update these rules to account for normal economic growth, these coefficients have remained unchanged since the finalization of the U.S. G-SIB rule in 2015. Since that time, the U.S. economy has experienced significant economic growth. Does the Fed monitor the impact of economic growth on the GSIB coefficients? Additionally, when will the FRB update the coefficients to address the economic growth?

The Federal Reserve Board's (Board) capital rules have been designed to significantly reduce the likelihood and severity of future financial crises by reducing both the probability of failure of a large banking organization and the consequences of such a failure were it to occur. Capital rules and other prudential requirements for large banking organizations should be set at a level that protects financial stability and maximizes long-term, through-the-cycle, credit availability and economic growth. Consistent with these principles, the Board originally calibrated the GSIB surcharge so that—given the circumstances of the financial system—each GSIB would hold enough capital to lower its probability of failure so that the expected impact of its failure on the financial system would be approximately equal to that of a large non-GSIB.

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